

## **American journal of numismatics.**

New York : American Numismatic Society, 1989-

<http://hdl.handle.net/2027/inu.30000126789431>

# HathiTrust



[www.hathitrust.org](http://www.hathitrust.org)

**Creative Commons Attribution-NonCommercial-ShareAlike**

[http://www.hathitrust.org/access\\_use#cc-by-nc-sa-4.0](http://www.hathitrust.org/access_use#cc-by-nc-sa-4.0)

This work is protected by copyright law (which includes certain exceptions to the rights of the copyright holder that users may make, such as fair use where applicable under U.S. law), but made available under a Creative Commons Attribution-NonCommercial-ShareAlike license. You must attribute this work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work). This work may be copied, distributed, displayed, and performed - and derivative works based upon it - but for non-commercial purposes only (if you are unsure where a use is non-commercial, contact the rights holder for clarification). If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one. Please check the terms of the specific Creative Commons license as indicated at the item level. For details, see the full license deed at <http://creativecommons.org/licenses/by-nc-sa/4.0>.

# PAGE NOT AVAILABLE



# PAGE NOT AVAILABLE

# PAGE NOT AVAILABLE



# AMERICAN JOURNAL OF NUMISMATICS

20

Second Series, continuing  
*The American Numismatic Society Museum Notes*

THE AMERICAN NUMISMATIC SOCIETY  
NEW YORK  
2008

© 2008 The American Numismatic Society

ISSN: 1053-8356

ISBN 10: 0-89722-305-5

ISBN 13: 978-0-89722-305-8

Printed in China

Digitized by Google

AY 5233 PP  
S. 1001- 6.4

Original from  
INDIANA UNIVERSITY

## CONTENTS

Editorial Committee	v
Editors' Note	vi
EDWARD T. NEWELL. Coins from the Excavations at Beisan (Nysa-Scythopolis, Tel Beth Shean): 1929–1935	1
HENRY S. KIM AND JOHN H. KROLL. A Hoard of Archaic Coins of Colophon and Unminted Silver ( <i>CH</i> I.3)	53
JONATHAN H. KAGAN. Paros, Melos and Naxos: Archaic and Early Classical Coinages of the Cyclades	105
SILVIA MANI HURTER. Torremuzza's SEGESTANORVM	113
CATHARINE LORBER. Thessalian Hoards and the Coinage of Larissa	119
GIOVANNI GORINI. The Die Sequence of Medma Silver Staters	143
LISA ANDERSON AND PETER G. VAN ALFEN. A Fourth Century BCE Hoard from the Near East	155
PETER G. VAN ALFEN. The Later Fourth Century BCE Coinage of Issos	199
KATERINI LIAMPI. NIKA, ΛΕΙΑ: Graffiti on Sicyonian and Theban Staters in a New Hoard from Boeotia / Beginning of 2000	209
SELENE PSOMA. <i>Panegyris</i> Coinages	227
SELENE PSOMA. Numismatic Evidence on the Ptolemaic Involvement in Thrace During the Second Syrian War	257
PETER G. VAN ALFEN, MARTÍN ALMAGRO-GORBEA, AND PERE PAU RIPOLLÈS. A New Celtiberian Hacksilber Hoard, c. 200 BCE	265
DANNY SYON. The Bronze Coinage of Tyre: The First Years of Autonomy	295
OLIVER D. HOOVER, ARTHUR HOUGHTON, AND PETR VESELÝ. The Silver Mint of Damascus under Demetrius III and Antiochus XII	305
FRANK L. KOVACS. Tigranes IV, V, and VI: New Attributions	337
SUZANNE FREY-KUPPER AND CLIVE STANNARD. "Pseudo-mints" and Small Change in Italy and Sicily in the Late Republic	351

INDIANA UNIVERSITY  
BLOOMINGTON

EMILY HAUG. Local Politics in the Late Republic: Antony and Cleopatra at Patras	
MICHEL AMANDRY. Le monnayage de L. Sempronius Atratinus revisité	421
BERNHARD E. WOYTEK. The Aureus Under Trajan: The Metrological Evidence	435
ANDREW BURNETT. The Early Coinage of Hadrian and the Deified Trajan at Rome and Alexandria	459
IOANNIS TOURATSOGLOU. Tarsos, Aboukir, etc.; before and after. Once again	479
KARSTEN DAHMEN. Alexander in Gold and Silver: Reassessing Third-century AD Medallions from Aboukir, Tarsos, and Related Objects	493
PHIL DAVIS. Hoard Notes: A Hoard of Dacian Imitations from Sarmizegetusa Regia	547
RICHARD SCHAEFER. Hoard Notes: A Roman Republican Silver Coin Hoard from Campania	551
RALPH A. CANNITO AND MICHAEL N. FEDOROV. On Some Rare Early Qārākhānid Fulūs	555
RALPH A. CANNITO AND MICHAEL N. FEDOROV. An Unpublished AH 607 Uzjend Dirham	579
JOHN M. KLEEGER. Washington Counterstamps—The Lafayette Connection	585
ALAN WALKER. Catalogues and Their Collectors	597

## AMERICAN JOURNAL OF NUMISMATICS

**Peter G. van Alfen**  
*Editor*

**Müşerref Yetim**  
*Managing Editor*

**Rob Fellman**  
*Copy Editor*

### Editorial Committee

**John W. Adams**  
*Boston, Massachusetts*

**John Ma**  
*Oxford University*

**William L. Bischoff**  
*New York, New York*

**Andrew R. Meadows**  
*American Numismatic Society*

**Jere L. Bacharach**  
*University of Washington*

**Eric P. Newman**  
*St. Louis, Missouri*

**Kenneth W. Harl**  
*Tulane University*

**Ira Rezak**  
*Stony Brook, New York*

**Paul T. Keyser**  
*IBM T. J. Watson Research Center*

**Stephen K. Scher**  
*New York, New York*

**John M. Kleeberg**  
*New York, New York*

**Stuart D. Sears**  
*Westport, Massachusetts*

**Robert Knapp**  
*University of California, Berkeley*

**Bernhard Weisser**  
*Münzkabinett  
Staatliche Museen zu Berlin*

**John H. Kroll**  
*Oxford, England*



## EDITORS' NOTE

This year the American Numismatic Society celebrates its 150th anniversary. Founded by a group of young numismatists in New York City in April, 1858, the ANS continues to thrive on the goodwill of its members, friends, and colleagues. In order to commemorate this milestone in our institution's history, we present this special anniversary issue of the *American Journal of Numismatics*. Like the celebratory *Centennial Publication* of 1958 (ed. H. Ingholt), the boards of this volume are covered with red fabric; *AJN* volume 21 (2009) will revert to blue.

We thank all of the contributors to this volume, whose enthusiastic response to the general call for papers and willingness to submit to the *Journal's* double blind review process, has made this a much more substantial volume, academically and physically, than it would have been otherwise. We are pleased too to note that within this international community of contributors there are many whose ties to the ANS go well beyond this publication, who include Curators and Trustees, past students and visiting scholars in the ANS's Graduate Summer Seminar, as well as recipients of the ANS's Archer M. Huntington award for outstanding career contributions to numismatics. Deserving special mention is Edward T. Newell's (1886–1941) posthumous contribution, "Coins from the Excavations at Beisan (Nysa-Scythopolis, Tel Beth Shean): 1929–1935." One of the most preeminent numismatists of his and subsequent generations, Newell was an ANS President and Curator, Huntington Medal recipient, and stands among the Society's greatest benefactors. It is most fitting that his lost manuscript was discovered and edited in time for inclusion in this anniversary volume.

We also thank most heartily Andrew Meadows and Ute Wartenberg Kagan for their assistance with the copy editing.

Peter G. van Alfen  
Editor

Müşerref Yetim  
Managing Editor

## Coins from the Excavations at Beisan (Nysa-Scythopolis, Tel Beth Shean): 1929–1935

PLATES 1–11

EDWARD T. NEWELL†

EDITED BY RICHARD WITSCHONKE

### Editor's Introduction

In the course of organizing the ANS archives in 2007, Archivist Joseph Ciccone discovered copies of three typescript documents written by former ANS President Edward T. Newell describing the coins found in the University of Pennsylvania excavations at Beisan during the seasons of 1929–1935.<sup>1</sup> Inquiries to the University of Pennsylvania Museum revealed that, with the exception of a few coins, these typescripts had never been published. So, with the concurrence and support of the University of Pennsylvania Museum, the Newell typescripts are presented here, some seventy years later, as Newell originally wrote them. The accuracy of the attributions of coins in largely deplorable condition, and the insightful and still relevant commentary on them are yet another demonstration of Newell's numismatic prowess.

The University of Pennsylvania Museum graciously provided access to the coins; photographs, accession numbers, and weights of most of the coins were obtained and these are included in this article. The editor's comments are enclosed in brackets [ ]. Otherwise, with the exception of reformatting, and the correction of obvious minor errors, the text is as Newell composed it.

The assistance of the following individuals in the preparation of this article is gratefully acknowledged: on the ANS staff, Alan Roche, Sylvia Karges, Peter Donovan, and Joseph Ciccone; on the University of Pennsylvania Museum staff, Shannon White, Chrisso Boulis, and Richard Zettler; and Gabriela Bijovsky and Rachel Barkay.

1. For details of the history of the typescripts, see R. Witschonke, "Better Late than Never: Newell Manuscript Finally Published," *ANS Magazine* 7.3 (2008), pp. 32–36.

## COINS FROM THE EXCAVATIONS AT BEISAN I [1930]

The following sixty-three coins were found during the excavations carried on by the Museum of the University of Pennsylvania at Beisan from September to December 1930.

These coins have been divided by the writer into six main categories lettered as follows: A (Greek and Greco-Roman); B (Roman Imperial); C (Byzantine); D (Mohammedan); E (Armenian) and F (Illegible). In our catalogue running numbers from 1 to 63 serve to identify the individual coins and occupy the first column<sup>2</sup> on the left. The second column contains the name of the issuing mint; the third column the emperor or king in whose name the coin was struck, together with the dates of his reign or the date when the coin was actually issued. In the fourth column will be found the metal and size in millimeters [as well as the weight in grams, where known] of each coin. The fifth and final column contains the more detailed description of the coin.<sup>3</sup> Here will also be found references to standard works such as, for the Greek coins: *Catalogue of the Greek Coins in the British Museum* (abbreviated BMC); for the Roman coins: H. Cohen, *Description Historique des monnaies de l'Empire romain* (abbreviated Cohen, vols. VI or VII); for the Byzantine coins: *Catalogue of the Imperial Byzantine Coins in the British Museum*, Vol. I (abbreviated BMC I); for the Mohammedan coins: *Catalogue of the Oriental Coins in the British Museum*, Vols. I and IV (abbreviated BMC I or IV); for the Armenian coins: Victor Langlois, *Numismatique de l'Armenia au moyen age* abbreviated Langlois.

### A) Greek and Greco-Roman

#### I.1 Palmyrene, Palmyra, 1st-2nd c. AD or later. AE 9, 0.4 g<sup>4</sup>

*Obverse:* Bust of Tyche (?) l.

*Reverse:* Palm tree

*Reference:* BMC Galatia, p. 149, 1

*Excavator's Reference:* 30-10-322, CN 270-O, South of drain

*Accession Number:* 31.50.354

Plate 1, no. 1

2. [The format of the coin listing which follows has been modified from the columnar format of the original Newell typescripts.]

3. [Also included is the excavator's number and notes for each coin, as well as the University of Pennsylvania Museum accession number, where known, and a Plate reference for those coins illustrated. The images are © University of Pennsylvania Museum of Archaeology and Anthropology.]

4. [This coin was published by G. M. Fitzgerald in *Publications of the Palestine Section of the University Museum, University of Pennsylvania*, vol. IV, 1939, *A Sixth Century Monastery at Beth-Shan (Scythopolis)*, p. 12, no. 14.]

**I.2 Phoenicia, Ptolemais-Ake, 2nd c. BC. AE 16, 3.0 g**

*Obverse:* Heads of the Dioscuri r., laureate, jugate

*Reverse:* Cornucopiae, between ΑΝΤΙΩΧΕΩΝ ΤΩΝ ΕΝ ΠΤΟΛΕΜ

*Reference:* BMC Phoenicia p. 129, 1

*Excavator's Reference:* 30-12-22, Tell summit debris

*Accession Number:* 31.50.358

Plate 1, no. 2

**I.3 Phoenicia, uncertain, 1st c. AD, AE 20, 6.3 g**

*Obverse:* Head of Roman Emperor to r. Inscription completely obliterated.

*Reverse:* Nike advancing to l. holding wreath in outstretched r. and palm (or trophy) in l. ....ΤΩΝ ΕΝ .....

*Reference:* Apparently an unpublished coin. Style, fabric and find-spot point unmistakably to a Syrian origin. The emperor's features, so far as they can be distinguished on a coin which has been considerably damaged by corrosion and subsequent cleaning, suggest those of Augustus. Syrian die cutters, however, were seldom completely successful in their attempts to catch the individual characteristics of such emperors as Augustus, Tiberius, Caligula or Claudius. With regard to the proposed attribution, it should be noted that the formula "ΤΩΝ ΕΝ" for Imperial times is peculiar to Ptolemais-Ake. Fortunately, the letters "ΤΩΝ" and the following "Ν" are fairly certain. The "Ε" has been damaged by a break in the flan, but the upright stroke and the lowest bar are clear. The upright stroke of the "Α" also seems to be sufficiently certain. For the known early Imperial coins of Ptolemais-Ake see BMC Phoenicia; also J. Rouvier in *Journal International d'Archeologie numismatique*, vol. IV, 1901, pp. 214–15; Imhoof-Blumer in *Numismatische Zeitschrift* XXXIII, 1901, p. 10.<sup>5</sup>

*Excavator's Reference:* 30-10-320, CN 270-O, North of drain

*Accession Number:* 31.50.356

Plate 1, no. 3

**I.4 Samaria, Caesarea, Macrinus, 217–18 AD, AE 26<sup>6</sup>**

*Obverse:* Laureate, draped bust to r. IMP....CRINVS AV.

*Reverse:* Within a tetrastyle temple with central arch and pediment, the city-goddess, wearing turreted crown and short chiton, stg. l., r. foot raised on uncertain object, holding in outstretched r. a human bust (?), l. resting on spear; at foot of spear, half-figure of river-god to front; in outer intercolumn-

5. [This coin was published in Fitzgerald, 1939, p. 11, no. 13. Newell's attribution and note (above) are quoted verbatim.]

6. [Coin not located in University of Pennsylvania Museum. Fitzgerald, 1939, p. 12, no. 17.]

niations, two male figures (Dioscuri?) standing to r. and l. respectively.

*Reference:* Also, apparently, an unpublished type not only for Macrinus but for Caesarea in general. A somewhat similar reverse type was used under Macrinus and his son Diadumenian at Aelia Capitolina (cf. *BMC Palestine*, Pl. X. 7), but in that case the figures in the outer intercolumniations are Nikes, and the representation of the river-god beside the city-goddess is naturally absent,

*Excavator's Reference:* 30-10-325, CN 270-P

*Accession Number:* 31.50.357

I.5 Samaria, Nysa-Scythopolis, Antoninus Pius, 138–161 AD, AE 23, 13.2 g

*Obverse:* Laureate head of Antoninus Pius to r., AVTOK..NT.....CEB EVC.

*Reverse:* Dionysos stg. to l. holding cup in outstretched r., resting l. upon a thyrsos. Traces of the usual panther at his feet may be distinguished faintly. ....CVP AA...

*Reference:* Apparently an unpublished variety. The rather individual features of Antoninus Pius are absolutely clear. Unfortunately, the name of the issuing city is completely obliterated, but the following initial letters of the city's epithet, Συρ, are quite clear. The title Συρίας Παλαιστίνης was employed not only at Nysa-Scythopolis, but also at other Palestinian cities, such as Neapolis and Tiberias. On the other hand, the type of Dionysos was particularly favored at Scythopolis in the second and third centuries AD. This, in conjunction with the coin's find spot, makes its attribution to Nysa-Scythopolis practically certain.<sup>7</sup>

*Excavator's Reference:* 30-9-189, CN

*Accession Number:* 31.50.358

Plate 1, no. 4

I.6 Uncertain Mint, Septimius Severus, 193–211 AD, AE 21, 5.2 g

*Obverse:* Laureate, draped bust of Septimius Severus to r. Inscription obliterated.

*Reverse:* Types and inscription completely obliterated. Style and fabric is Palestinian.

*Excavator's Reference:* 30-9-117, CN 243

*Accession Number:* 31.50.359

Plate 1, no. 5

7. [This coin was published in Fitzgerald, 1939, p. 12, no. 15; Newell's attribution and note (above) are quoted verbatim. It was most recently published in R. Barkay, *The Coinage of Nysa-Schthopolis (Beth-Shean)*, 2003, p. 202, no. 15, with additional references.]

**I.7 Uncertain Mint, Caracalla (?), AE 21, 8.6 g<sup>8</sup>**

*Obverse:* A very much worn coin. Faint traces of the imperial bust can still be made out and the features somewhat suggest those of Caracalla.

*Reverse:* The reverse types and inscriptions are completely obliterated. The fabric suggests Palestine.

*Excavator's Reference:* 30-10-322b, CN 270-O, south of drain

*Accession Number:* 31.50.360

Plate 1, no. 6

**B) Roman Imperial**

**I.8 Antioch, Claudius II, 268–70 AD, Billon 21, 3.3 g**

*Obverse:* I..C.CL...IVS... Radiate, draped bust r.

*Reverse:* IVNO REGINA. Draped figure of Juno standing l. holds patera in outstretched r. and rests l. upon scepter. In the exergue, B.

*Reference:* Cohen, VI, p. 143, no. 134.

*Excavator's Reference:* 30-9-101a, CN 249, loculus at W.

*Accession Number:* 31.50.361

Plate 1, no. 7

**I.9 Antioch, Probus (?), 276–82 AD, Billon 22, 2.7 g**

*Obverse:* .....S PF AVG. Radiate, draped bust r.

*Reverse:* Completely obliterated. The fabric, like the preceding coin, is that associated with the mint at Antioch.

*Excavator's Reference:* 30-9-101b, CN 249, loculus at W.

*Accession Number:* 31.50.362

Plate 1, no. 8

**I.10 Rome, Constantine I, 313–17 AD, AE 21<sup>9</sup>**

*Obverse:* ... CONSTANTINVS PF. AVG. Laureate, draped bust to r.

*Reverse:* SOLI INVICTO COMITI. .. Radiate figure of Sol l., r. hand raised, l. holds the globe. In the exergue, RS

*Reference:* Cohen, VII, p. 291, no. 536.

*Excavator's Reference:* 30-10-315a, CN 270-D

*Accession Number:* 31.50.363

**I.11 Ticinum, Constantine I, 320–26 AD, AE 20<sup>10</sup>**

*Obverse:* CONSTANTINVS AVG. Laureate head to r.

*Reverse:* D N CONSTANTINI MAX AVG around a wreath containing VOT/XX/U. In the exergue, QT.

8. [Fitzgerald, 1939, p. 12 no. 16.]

9. [Coin not located in University of Pennsylvania Museum. Fitzgerald, 1939, p. 12, no. 18.]

10. [Coin not located in University of Pennsylvania Museum.]

*Reference:* Cohen VII, p. 243, no. 126. Many numismatists believe the mint to have been Tarraco in Spain. Cf. Jules Maurice, *Numismatique Constantinienne*, vol.2, pp. 197 ff.

*Excavator's Reference:* 30-10-197, near cemetery

*Accession Number:* 31.50.364

I.12 Uncertain Mint, Constantinus II, 337-61 AD, AE 19, 2.3 g

*Obverse:* D N CONSTANTIVS PF AVG. Diademed, draped bust r.

*Reverse:* FEL TEMP REPARATIO. Emperor to l. spearing fallen horseman. Exergual letters off flan.

*Reference:* Cohen, VII, p. 447, no. 45.

*Excavator's Reference:* 30-9-58a, CN 242

*Accession Number:* 31.50.365

Plate 1, no. 9

I.13 Antioch, Constantius II, after 345 AD, AE 16, 1.7 g

*Obverse:* Same types and inscriptions as on the preceding.

*Reverse:* In the exergue, AN.

*Reference:* Cohen, VII, p. 447, no. 45.

*Excavator's Reference:* 30-9-58b, CN 242

*Accession Number:* 31.50.366

Plate 1, no. 10

I.14 Uncertain Mint, Constantius II, 337-61 AD, AE 21, 4.7 g

*Obverse:* Same types and inscriptions as on the preceding.

*Reverse:* In reverse l. field, S.

*Reference:* Cohen, VII, p. 447, var. of 45.

*Excavator's Reference:* 30-9-26, CN tomb 242

*Accession Number:* 31.50.367

Plate 1, no. 11

I.15 Uncertain Mint, uncertain, AE 16, 2.1 g

*Obverse:* Diademed, draped bust r. of an uncertain Emperor in the period of Valentinian I to Arcadius. Inscription completely obliterated.

*Reverse:* Type and inscription obliterated.

*Excavator's Reference:* 30-9-27a, CN just below tomb 241

*Accession Number:* 31.55.368

Plate 1, no. 12

I.16 Nicomedia, uncertain, AE 14, 1.1 g

*Obverse:* .....VS..... Diademed draped bust r., perhaps Valentinian II or Theodosius I

**Reverse:** Inscription in a wreath, probably VOT. X MVLTT XX or similar. In the exergue, SMNA.

**Excavator's Reference:** 30-9-27b, CN just below tomb 241

**Accession Number:** 31.50.369

Plate 1, no. 13

I.17 Uncertain Mint, uncertain late Roman, AE 10, 0.8 g<sup>11</sup>

**Obverse:** Emperor's hd. r.?

**Reverse:** Bow?

**Excavator's Reference:** 30-10-219A, CN 266

**Accession Number:** 31.50.370]

Plate 1, no. 14

### C) Byzantine

I.18 Uncertain Mint, Anastasius I, 491–518 AD, AE 24 follis, broken, 5.7 g

**Obverse:** DN ANAS..... Diademed, draped bust r.

**Reverse:** Large M, surmounted by a cross. On l., star. Exergual inscription obliterated.

**Reference:** Cf. BMC I, p. 5, nos. 36–41.

**Excavator's Reference:** 30-10-232a, CN 266A

**Accession Number:** 31.50.371

Plate 1, no. 15

I.19 Nicomedia, Anastasius I, 491–518 AD, AE 19 half follis, 4.2 g<sup>12</sup>

**Obverse:** DN ANAST..... Diademed, draped bust r.

**Reverse:** Large K. On l., long cross flanked by the letters N and I. On r., star.

**Reference:** Cf. BMC I, p. 8, no. 64.

**Excavator's Reference:** 30-10-322C, CN 270-O south of drain

**Accession Number:** 31.50.372

Plate 2, no. 16

I.20 Constantinople, Uncertain, AE 31 follis, 14.9 g

**Obverse:** .....PP..... Largely obliterated bust of Anastasius I or Justin I.

**Reverse:** Large M, surmounted by a cross and flanked by stars. Beneath, A. In exergue, C (ON)

**Excavator's Reference:** 30-10-192, CN

**Accession Number:** 31.50.373

Plate 2, no. 17

11. [Coin omitted in Newell typescript.]

12. [Fitzgerald, 1939, p. 12, no. 19.]



I.21 Constantinople, Justin I, 518–27 AD, AE 31 follis, 11.4 g<sup>13</sup>

*Obverse:* D N IVSTI ..... Diademed, draped bust r.

*Reverse:* Large M, surmounted by a cross and flanked by stars (?). In the exergue, C (ON).

*Reference:* BMC I, p. 14, no. 20–32.

*Excavator's Reference:* 30-10-315b, CN 270-D

*Accession Number:* 31.50.374

Plate 2, no. 18

I.22 Constantinople, Justin I, 518–27 AD, AE 30 follis<sup>14</sup>

*Obverse:* D N IVSTINVS P P AVG. Similar to the preceding.

*Reverse:* Similar to the preceding except that beneath the M there is an A, and in the exergue is NO. Style barbarous.

*Reference:* Cf. BMC I, p. 14, no. 24.

*Excavator's Reference:* 30-9-148, CN NW of 255

*Accession Number:* 31.50.375

I.23 Uncertain Mint, Justinian I, 527–65 AD, AE 28 follis, 14.8 g<sup>15</sup>

*Obverse:* D N IVSTINI...PP... Diademed, draped bust r.

*Reverse:* Large M, surmounted by a cross and flanked by a star on l., and cross on r. Exergual letters obliterated.

*Reference:* Cf. BMC I, p. 29, nos. 28ff.

*Excavator's Reference:* 30-10-325b, CN 270-P

*Accession Number:* 31.50.376

Plate 2, no. 19

I.24 Alexandria, Justinian I, 527–65 AD, AE 16 twelve nummia, 1.6 g<sup>16</sup>

*Obverse:* Portions of D N IVSTINIANVS P P AVG. Diademed, draped bust r.

*Reverse:* Cross flanked by I and B. In the exergue, AΛΞ.

*Reference:* BMC I, p. 62, nos. 342–43.

*Excavator's Reference:* 30-10-322d, CN 270-O, south of drain

*Accession Number:* 31.50.377

Plate 2, no. 20

13.[Fitzgerald, 1939, p. 12, no. 20.]

14. [Coin not located in University of Pennsylvania Museum.]

15.[Fitzgerald, 1939, p. 12, no. 21.]

16. Nos. I.24–I.29 are probably local imitations of the regular Alexandrian currency. The flans of the latter are comparatively thick, while all of the flans of the above specimens are not only very thin, but also smaller in diameter than their Alexandrian prototypes. [Fitzgerald, 1939, p. 12, no. 22.]

**I.25 Alexandria, Justinian I, 527–65 AD, AE 14 twelve nummia, 1.0 g<sup>17</sup>**

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Reference:* BMC I, p. 62, nos. 342–43.

*Excavator's Reference:* 30-10-322e, CN 270-O, south of drain

*Accession Number:* 31.50.378

Plate 2, no. 21

**I.26 Alexandria, Justinian I, 527–65 AD, AE 14 twelve nummia, 1.0 g**

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 30-10-219, CN 266

*Accession Number:* 31.50.379

Plate 2, no. 22

**I.27 Alexandria, Justinian I, 527–65 AD, AE 14 twelve nummia, 1.0 g**

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 30-10-219, CN 266

*Accession Number:* 31.50.380

Plate 2, no. 23

**I.28 Alexandria, Uncertain. AE 15 twelve nummia, 0.9 g**

*Obverse:* Completely obliterated.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 30-10-193a, CN

*Accession Number:* 31.50.381

Plate 2, no. 24

**I.29 Alexandria, Uncertain. AE 12 twelve nummia, 0.7 g**

*Obverse:* Completely obliterated.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 30-10-241a, CN 266A, low level

*Accession Number:* 31.50.382

Plate 2, no. 25

**I.30 Constantinople, Justin II, 565–78 AD, AE 27 follis, 11.8 g**

*Obverse:* D N ISTINVS P P AVG. Justin II (on l.), nimbate and holding globe; Sophia (on r.) also nimbate and holding scepter, seated facing on double throne.

*Reverse:* Large M, surmounted by a cross. On l., ANNO; on r. 4; beneath, E;

17. [Fitzgerald, 1939, p. 12, no. 23.]

in the exergue, CON.

*Reference:* BMC I, p. 79, no. 45.

*Excavator's Reference:* 30-12-110, NE 1549

*Accession Number:* 31.50.383

Plate 2, no. 26

I.31 Antioch, Tiberius Constantine, 578-82 AD, AE 31 follis, 11.1 g<sup>18</sup>

*Obverse:* ANTNOCΩNATAT AVG. Bust of Tiberius II facing; wears consular robes; holds mappa in r. and eagle-tipped sceptre in l.

*Reverse:* Large M, surmounted by a cross. On l., ANNO; on r., III. In the exergue, THEUPS. *Reference:* BMC I, p. 116, nos. 85-6.

*Excavator's Reference:* 30-10-307, CN 270-H

*Accession Number:* 31.50.384

Plate 2, no. 27

I.32 Alexandria, Maurice Tiberius, 582-602 AD, AE 14 twelve nummia, 3.5 g

*Obverse:* D N mARIC P P AV. Diademed, draped bust r.

*Reverse:* Cross flanked by I and B. In the exergue, AΛEΞ. Alexandrian fabric.

*Reference:* BMC I, p. 148, nos. 220-27.

*Excavator's Reference:* 30-9-107, CN 248

*Accession Number:* 31.50.385

Plate 2, no. 28

I.33 Uncertain mint, Uncertain, AE 21, holed, 3.1 g

*Obverse:* Completely obliterated.

*Reverse:* Large K. On l., cross. Below, countermark of a cross in a circle.

*Excavator's Reference:* 30-10-232b, CN 266 A

*Accession Number:* 31.50.386

Plate 2, no. 29

I.34 Constantinople, Phocas, 602-10 AD, AE 23 twenty nummia, 5.1 g<sup>19</sup>

*Obverse:* .....P RP AVG. Bust of Phocas facing in consular dress.

*Reverse:* X X. In the exergue, CON.

*Reference:* BMC I, p. 167, nos. 49-54.

*Excavator's Reference:* 30-10-315c, CN 270-D

*Accession Number:* 31.50.387

Plate 3, no. 30

I.35 Constantinople, uncertain, AE 14 ten nummia, 2.0 g

*Obverse:* Faint traces of an Imperial bust facing.

*Reverse:* Large I. On l., ANNO. On r., X (?). In the exergue, CON.

18. [Fitzgerald, 1939, p. 12, no. 24.]

19. [Fitzgerald, 1939, p. 12, no. 25.]


*Excavator's Reference:* 30-10-242a, CN 266 B

*Accession Number:* 31.50.388

Plate 3, no. 31

I.36 Constantinople, Heraclius I, 610-41 AD, AE 22, square follis, 4.2 g<sup>20</sup>

*Obverse:* Heraclius I, Heraclius Constantine and Martina, crowned and holding globes, standing facing.

*Reverse:* Large M. Above, ANNO. On l., . On r., XUL. Beneath, A... In the exergue, CON. Year 16 (?).

*Reference:* Cf. BMC I, p. 207, nos. 179 ff.

*Excavator's Reference:* 30,10,335, CN 270, grave K

*Accession Number:* 31.50.389

Plate 3, no. 32

I.37 Carthage?, Constans II Constantine, 641-68 AD, AE 14 follis, 3.4 g

*Obverse:* Faint traces of a facing Imperial bust.

*Reverse:* Cross, surmounted by a star and flanked by uncertain letters. In the exergue CRT (?).

*Reference:* Cf. BMC I, Pl. XXXIII, 21.

*Excavator's Reference:* 30-10-219d, CN 266

*Accession Number:* 31.50.390

Plate 3, no. 33

#### D) Mohammedan

#### Ommeyyade Caliphs

I.38 Damascus, Abd-el-Malik, 685-705 AD, 80 AH. AV 19 dinar<sup>21</sup>

*Obverse:* لا اله الا الله وحده / لا شريك له

*Margin:* محمد رسول الله ارسله بالهدى ودين الحق ليظهره على الدين كله

*Reverse:* الله احد الله / الصمد لم يلد / وليولد

*Margin:* في سنة ثنتين

*Reference:* BMC I, p. 1, no. 4

*Excavator's Reference:* 30,-10-195, CN

*Accession Number:* 31.50.401

#### Mamluks

I.39 Uncertain Mint, Ez-Zahir Beybars, 1260-77 AD, 659-61 AH. Base AR 14 half dirhem, 1.5 g

*Obverse:* Inscription in two lines above lion prowling to l.

*Reverse:* Inscription in two lines.

*Reference:* Variety not in BMC IV.

20. [Fitzgerald, 1939, p. 12, no. 26.]

21. [Coin not located in University of Pennsylvania Museum.]

*Excavator's Reference:* 30-10-198, CN surface

*Accession Number:* 31.50.402

### E) Armenian

#### I.40 Uncertain Mint, [Leo V?]. AE 24<sup>22</sup>

*Obverse:* Heraldic lion to l. Inscription around.

*Reverse:* Cross, stars in the four angles, the whole in a circle. Inscription around.

*Excavator's Reference:* 30-10-194, CN

*Accession Number:* 31.50.403

### F) Illegible

#### I.41 Small, dumpy flan suggestive of the bronze coins struck at Antioch under Antiochus III and his successors, AE 11, 1.5 g<sup>23</sup>

*Reference:* Cf. *BMC The Selucid Kings of Syria*, Pl. IX, nos. 11-13

*Excavator's Reference:* 30-10-320b, CN 270-O, north of drain

*Accession Number:* 31.50.404

Plate 3, no. 34

#### I.42 Similar to preceding, AE 10, 1.0 g<sup>24</sup>

*Excavator's Reference:* 30-10-320c, CN 270-O, north of drain

*Accession Number:* 31.50.405

Plate 3, no. 35

#### I.43 Thick, dumpy flan. On one side there seem to be traces of a symbol or monogram. AE 8, 1.2 g

*Excavator's Reference:* 30-10-337, CN 270-L

*Accession Number:* 31.50.406

Plate 3, no. 36

#### I.44 The cast flan with beveled edges and "gates" resemble the Jewish procuratorial coinages of the first century AD, AE 17, 2.6 g

*Reference:* Perhaps a specimen similar to *BMC Palestine*, Pl. XXVIII, nos. 17-20, as traces of an upright palm branch appear to be visible on the reverse.

*Excavator's Reference:* 30-9-186, CN

*Accession Number:* 31.50.407

Plate 3, no. 37

22. [Coin not located in University of Pennsylvania Museum.]

23. [Fitzgerald, 1939, p. 11, no. 11.]

24. [Fitzgerald, 1939, p. 11, no. 12.]

- I.45 Completely illegible on both sides. AE 25, 7.1 g  
*Excavator's Reference:* 30-10-325a, CN 270-P  
*Accession Number:* 31.50.408?  
 Plate 3, no. 38
- I.46 Thick, dumpy fabric. Types completely obliterated. AE 13, 2.4 g  
*Excavator's Reference:* 30-10-305, CN 270-A  
*Accession Number:* 31.50.409  
 Plate 3, no. 39
- I.47 Thin, spread fabric, worn smooth on both sides. Pierced by a large hole for suspension. AE 23, 3.6 g  
*Excavator's Reference:* 30-10-193b, CN debris east of 264  
*Accession Number:* 31.50.410
- I.48 Completely obliterated by corrosion. AE 24, 3.9 g  
*Excavator's Reference:* 30-10-242b, CN 266-B  
*Accession Number:* 31.50.411
- I.49 Completely obliterated by corrosion. AE 12, 1.0 g  
*Excavator's Reference:* 30-10-242c, CN 266-B  
*Accession Number:* 31.50.412
- I.50 Types completely obliterated. Late fabric. AE 15, 1.5 g  
*Excavator's Reference:* 30-10-314, CN 270-L  
*Accession Number:* 31.50.413
- I.51 Types completely obliterated. AE 21<sup>25</sup>  
*Excavator's Reference:* 30-9-102, CN 249 (loculus at W.)  
*Accession Number:* 31.50.414
- I.52 Types completely obliterated. AE 23  
*Excavator's Reference:* 30-9-102, CN 249 (loculus at W.)  
*Accession Number:* 31.50.415
- I.53 Types completely obliterated. AE 24  
*Excavator's Reference:* 30-9-102, CN 249 (loculus at W.)  
*Accession Number:* 31.50.416
- I.54 Types completely obliterated. AE 20  
*Excavator's Reference:* 30-11-16, Tell Redim  
*Accession Number:* 31.50.417

25. [Coins I.51–I.53] were once corroded together into a single mass, now broken into two pieces. Fabric is typical of the billon coinages from Claudius II to Diocletian.

I.55 Thickish fabric. Types obliterated. AE 12, broken

*Excavator's Reference:* 30-10-219e, CN 266

*Accession Number:* 31.50.418

I.56 Thin fabric. Types obliterated. AE 10

*Excavator's Reference:* 30-10-232c, CN 266-A

*Accession Number:* 31.50.419

I.57 All types completely obliterated. AE 17

*Excavator's Reference:* 30-10-241b

*Accession Number:* 31.50.420

I.58 All types completely obliterated. AE 15

*Excavator's Reference:* 30-10-241c

*Accession Number:* 31.50.421

I.59 All types completely obliterated. AE 14

*Excavator's Reference:* 30-10-241d

*Accession Number:* 31.50.422

I.60 All types completely obliterated. AE 13

*Excavator's Reference:* 30-10-241e

*Accession Number:* 31.50.423

I.61 All types completely obliterated. AE 10

*Excavator's Reference:* 30-10-241f

*Accession Number:* 31.50.424

I.62 All types completely obliterated. AE 10

*Excavator's Reference:* 30-10-241g

*Accession Number:* 31.50.425

I.63 All types completely obliterated. AE 9

*Excavator's Reference:* 30-10-241h

*Accession Number:* 31.50.426

When the preceding coins were delivered to the present writer for study and cataloging, they had already been cleaned and, in this respect, nothing further could be done. Unfortunately their average condition is exceedingly poor, with the result that twenty-three coins (nos. I.41 to I.63 inclusive) prove to be illegible and absolutely unidentifiable. In some instances their fabric or flans hint at certain probable periods of issue, but the suggestions which have been hazarded must be looked upon as purely tentative. The present lamentable condition of the coins is obviously due more to the excessive wear to which they had been subjected in ancient

times than to corrosion in the earth and subsequent cleaning. It may be said that, with very few exceptions, the coins found in the excavations at Beisan had seen a great amount of circulation and hard use before being lost or discarded.

Of the decipherable Greek and Greco-Roman coins here described, only one (no. I.2)—an autonomous issue of Ake Ptolemais—dates from the years before the birth of Christ. Then follow three (nos. I.1, I.3, I.5) of the first and second centuries AD and three more (nos. I.4, I.5, I.6) from the age of the Severi. The mints here represented are, interestingly enough, the great desert metropolis of Palmyra and the flourishing seaport towns of Ake Ptolemais and Caesarea, i.e. the termini of the much frequented trade route between the coast and inner Syria.<sup>26</sup> This high road passed through the ancient Beth-Shean, the later Nysa-Scythopolis, now Beisan. Of this city itself only one decipherable specimen (no. I.5) is contained among the spoils of the 1930 campaign.

It is rather curious that of the seven more or less legible Greek and Greco-Roman coins here listed, no less than three (nos. I.3, I.4, I.5) should represent apparently unpublished types or varieties. This fact would seem to indicate that, in spite of the great and active interest always felt in Palestinian coins and the consequent devoted labors of many well known scholars, there still remains a fruitful field for future scholars will they but continue carefully to inspect and study the thousands of specimens which have come down to us from the coinages of ancient Palestine. Details with regard to the three unusual coins just mentioned will be found in the notes accompanying our catalogue.

Roman Imperial issues from the 1930 campaign at Beisan commence with the reign of Claudius II, becoming more numerous in the reign of Constantius II. Specimens from the immediately succeeding reigns (nos. I.15–I.17) seem also to be present—at least so far as their very bad state of preservation will allow us to infer. The mints (when decipherable) of the Roman Imperial issues are, naturally enough, mostly eastern, such as Antioch (nos. I.8, I.9, I.13) and Nicomedia (no. I.16). But Rome and Ticinum (or Tarraco?) are also represented by a single specimen each (nos. I.10 and I.11).

More fully represented (or, perhaps, more certainly decipherable because of their generally better condition) are the Byzantine Imperial issues (nos. I.18–I.37). These commence with the true beginning of purely Byzantine coinages under Anastasius, and continue without interruption to the reign of Heraclius I (610–641 AD) when Syria fell into the hands of the Arabs. A later intruder is no. I.37, a coin of Constans II apparently struck at Carthage. With the exception of this latter piece, the mints represented are Constantinople (seven coins), Nicomedia (one coin), Antioch (one coin) and Alexandria (seven coins). A noticeable fact here

26. T. Mommsen, *Provinces of the Roman Empire* II, chap. 10.



is the comparative scarcity of specimens from the mint at Antioch, a mint which one would have expected to be better represented at Beisan. Perhaps the district at this time drew more upon Alexandria than upon Antioch for its regular supply of small change—barring, of course, the capital (Constantinople) itself, which always supplied by far the greatest proportion of the circulating medium throughout the Empire. The few statistics as are available to the writer for other Palestinian sites would seem to present another and more natural picture.<sup>27</sup>

The comparatively large number of the curious little twelve nummia pieces of Alexandria (nos. I.24–I.29, I.32) found at Beisan appears to be somewhat unusual, though a similar situation seems to occur also at Jerusalem.<sup>28</sup> Our interest is increased, if anything, by the fact that some of these pieces appear to be local imitations rather than *bona fide* issues of the Alexandria mint. An explanation may, perhaps, be sought in the once much frequented main trade route connecting Mesopotamia, Palestine and Egypt, and which passed through Beisan.<sup>29</sup> Now it may well be that as late as the sixth Century AD many travelers and merchants still continued to pass along this road, coming from Egypt and bringing with them these common little coins. At Beisan they would be desirous to get rid of what still remained of them as being probably useless in the new districts which they were about to enter. The imitations may have been made locally, either because there was a demand for this type of coin, or because they could be foisted upon unwary travelers proceeding towards Egypt and willing to pick up (at a discount ?) coins they expected later to use in the markets along the Nile. The fact that similar coins, in not negligible quantities, have also turned up in the Byzantine levels at Jerusalem may be definitely connected with the pilgrim traffic from Egypt to the

27. Of the eight Byzantine coins found at Samaria (cf. *Harvard Excavations at Samaria*, 1908–10, vol. I, p. 272), three are from Constantinople, two from Thessalonica, one from Antioch and two are illegible. The hoard of Byzantine coins found on February 11, 1928, at Khirbat Dubel on Mt. Carmel (*Quarterly of the Department of Antiquities of Palestine*, vol. I, 1931, pp. 55 ff.) contained, out of a total of 325 coins, two hundred and twenty eight coins of Constantinople, eighteen of Nicomedia, sixty seven of Antioch and none of Alexandria. The writer has also recently studied sixty three coins from the 1930 excavations at Megiddo, but these contained only three Byzantine coins—all from the mint at Constantinople. The coins found at Beth Zur contained no Byzantine coins at all.

28. J. W. Crowfoot and S. M. Fitzgerald, "Excavations in the Tyropoeon Valley, Jerusalem, 1927," in *The Palestine Exploration Fund Annual*, 1929, pp. 103–20. The writer's thanks for calling his attention to this article are due Mr. S. McA Mosser, assistant librarian of the American Numismatic Society. Among the eighty-three Byzantine coins unearthed only twenty-three are legible enough to distinguish their mints as follows: nine from Constantinople, one from Thessalonica, one from Nicomedia, four from Cyzicus, three from Antioch, five from Alexandria. The five coins from the Alexandrian mint are all the little twelve nummia pieces—exactly as at Beisan.

29. Cf., for instance, G. A. Smith, *The Historical Geography of the Holy Land*, pp. 152–3.

Holy City. Similarly, pilgrim visitors to the sacred sites in and around Beisan may also account for some of the pieces found there. Careful research among the many public and private collections, including dealer's stocks, in Palestine might show whether the finding of these Byzantine coins of Alexandrian mintage is really usual and widespread in that country or not. The special coinage produced in and for Egypt throughout the first to the third Century AD is not frequently to be found in excavations outside of Egypt.<sup>30</sup> Hence the appearance in quantities of the little pieces now under discussion would seem to argue some special reason for their comparative frequency in the excavations at Beisan and Jerusalem.

The Mohammedan issues from Beisan comprise the only two coins in the more precious metals—gold and silver—found in the 1930 excavations. The gold dinar (no. I.38), while in itself not a rare coin, is a beautiful specimen and interesting as an early relic of the Arab occupation of Palestine. The Armenian copper piece (no. I.40) seems not usually to be found so far to the south as our site, though its presence need hardly surprise us very much in view of the active part played by the little Armenian kingdom of Cilicia in the Second and Third Crusades.

### COINS FROM THE EXCAVATIONS AT BEISAN II [1929–1932]<sup>31</sup>

The following one hundred and twenty-four coins from the excavations at Beisan were delivered to the writer by Dr. Tobler in the summer of 1935. They represent the gleanings of previous years, especially from the cemetery. In describing the individual coins references are made to the following standard works:

Abbr.	Authority.
BMC Seleucid Kings	<i>Catalogue of the Greek Coins in the British Museum, The Seleucid Kings of Syria.</i> Percy Gardner. 187.
BMC Galatia	<i>Catalogue of the Greek Coins in the British Museum, Galatia, Cappadocia &amp; Syria.</i> Warwick Wroth. 189.
BMC Phoenicia	<i>Catalogue of the Greek Coins in the British Museum, Phoenicia.</i> G. F. Hill. 1910.
BMC Palestine	<i>Catalogue of the Greek Coins in the British Museum, Palestine.</i> G. F. Hill. 1914.
Svoronos	<i>Ta Nomismata tou Kratous ton Ptolemaion.</i> I. Svoronos. 1904.

30. We are here considering only the coinage peculiar to Egypt under the Romans, not the latin issues struck there from *circa* 296 AD to Anastasius which, being practically identical with the coinage of the remainder of the empire, would, and actually did, circulate freely outside of Egypt.

31. [Based on their accession numbers, these coins appear to derive from the 1929 and 1932 seasons at Beisan. They were presumably provided to Newell as a single group.]

Webb, Vol. 1 and Vol. 2	<i>The Roman Imperial Coinage</i> . Vol. V, Parts one and two. Percy Webb. 1927.
Cohen, VII	<i>Description historique des monnaies frappées sous l'Empire Romain</i> . Vol. VII. Henry Cohen. 1888.
BMC Byz.	<i>Catalogue of the Imperial Byzantine Coins in the British Museum</i> . Vol. I. Warwick Wroth. 1908.
BMC Add. I-IV	<i>Catalogue of the Oriental Coins in the British Museum. Additions to Vols. I-IV</i> . Stanley Lane-Poole. 1889.
BMC I	<i>Catalogue of the Oriental Coins in the British Museum. The Coins of the Eastern Khaleefehs</i> . Vol. I. Stanley Lane-Poole. 1876.
Paris	<i>Catalogue des monnaies musulmanes de la Bibliothèque Nationale</i> . Henri Lavoix. 1887.

Such of the Arab coins as have been described as "apparently unpublished" have not been found listed in the London, Paris or Berlin catalogues.

#### Seleucid Kings of Syria

- II.1 Antioch, Alexander II Zebina, 128 BC BMC Add. I-IV 123, AE 19, 6.9 g  
*Obverse*: Diademed head of the king to r.  
*Reverse*: ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ on l. young Dionysus standing, facing to l.; holds cantharus and thyrsus. Before him, ΔΠΡ (=129 BC). In outer l. field, ΙΞ  
*Reference*: Cf. BMC Seleucid Kings etc. p. 82, nos. 12-15.  
*Excavator's Reference*: 677  
*Accession Number*: 29.108.885A  
 Plate 3, no. 40

#### Seleucis and Pieria

- II.2 Antioch, [1st century BC], AE 19, 9.3 g  
*Obverse*: Head of Zeus to r.  
*Reverse*: ANTIOXEON THΣ on r., ΜΗΤΡΟΠΟΛΕΩΣ on l. Zeus enthroned to l. holds eagle and scepter. The date is off flan.  
*Reference*: Cf. BMC Galatia, [p. 153, nos. 12ff]  
*Excavator's Reference*: 32-15-306  
*Accession Number*: 32.15.337  
 Plate 3, no. 41
- II.3 Antioch, Trajan Decius, 249-251 AD, Potin 27 tetradrachm, 12.0 g  
*Obverse*: ΑΥΤ Κ Γ ΜΕ ΚΥΤΡΑΙΝΟC ΔΕΚΙΟC CEB. Laureate draped bust to r.  
 Beneath, .....

*Reverse:* ΔΗΜΑΡΧ ΕΞ ΟΥΚΙΑC. Eagle, holding wreath in beak, standing to r. on a palm branch. Beneath, SC.

*Reference:* Cf. *BMC Galatia*, [p. 220, nos. 578ff]

*Excavator's Reference:* 569

*Accession Number:* 29.108.886

Plate 3, no. 42

### Phoenicia

#### II.4 Dora (?), Trajan, 98–117 AD, AE 23, 10.4 g

*Obverse:* Inscription obliterated. Head of Trajan (?) to r.

*Reverse:* Inscription obliterated. Apparently, faint traces of head of Tyche to r., surrounded by a wreath.

*Reference:* Cf. *BMC Phoenicia*, p. 117, no. 33.

*Excavator's Reference:* 138

*Accession Number:* 29.108.887

Plate 3, no. 43

#### II.5 Ptolemais, Nero, 54–69 AD, AE 25<sup>32</sup>

*Obverse:* .....GER P M TR .. Head (obliterated) to r. of Nero.

*Reverse:* Inscription obliterated. The Emperor Claudius as founder, plowing r. with ox and cow; behind, four legionary standards.

*Reference:* *BMC, loc. cit.*, p. 131, nos. 16–8.

*Excavator's Reference:* 3317

#### II.6 Tyre, Elagabalus, 218–222 AD, AE 26, 14.4 g

*Obverse:* Inscription obliterated. Laureate, draped, cuirassed bust of Elagabalus to r.

*Reverse:* .VR.... Temple of Astarte with six columns; within, statue of Astarte; beneath, in the exergue, altar between murex-shell and palm (obliterated).

*Reference:* *BMC, loc. cit.*, p. 276, nos. 404–5.

*Excavator's Reference:* 32-15-311

*Accession Number:* 32.15.342

Plate 3, no. 44

#### II.7 Tyre, Gallienus, 253–268 AD, AE 27<sup>33</sup>

*Obverse:* IMP.....IENVS AVG. Laureate, draped bust to r.

*Reverse:* COL TVR MET. City-goddess r., both arms raised in adoration before a temple containing the club of Heracles. In field, r., murex-shell.

*Reference:* Cf. *BMC, loc. cit.*, p. 294, no. 490.

*Excavator's Reference:* 3367

32. [Coin not located in University of Pennsylvania Museum.]

33. [Coin not located in University of Pennsylvania Museum.]

## Samaria

## II.8 Caesarea, Herrenius Etruscus, 249–252 AD, AE 23, 12.1 g

*Obverse:* Inscription illegible. Young, radiate, draped bust of Herrenius (probably) to r.

*Reverse:* Inscription obliterated. The Emperor, or Caesar, to r. on prancing horse; he carries a couched spear.

*Reference:* BMC Palestine, p. 36, no. 18i.

*Excavator's Reference:* 3318

*Accession Number:* 29.108.890

Plate 3, no. 45

## II.9 Nysa-Scythopolis, Nero, 54–69 AD. Struck 54–55 AD, AE 23, 10.1 g

*Obverse:* ...ΩΝ ΚΑΑ..... Laureate head of Nero to r.

*Reverse:* Legend obliterated. City-goddess in long chiton standing l. between L and PA.

*Reference:* BMC, loc. cit., p. 75, nos. 1–3.

*Excavator's Reference:* 3227

*Accession Number:* 29.108.891

Plate 4, no. 46

## Judea

II.10 Jerusalem, Tiberius, 14–37 AD, AE 15<sup>34</sup>

*Obverse:* TIB KAI CAP in three lines within a wreath.

*Reverse:* Inscription obliterated. Palm-branch.

*Reference:* BMC, loc. cit., pp. 254–57, nos. 31–52.

*Excavator's Reference:* 3470

## The Ptolemaic Kings of Egypt

II.11 Tyre, Ptolemy IV, 221–204 BC, AE 42<sup>35</sup>

*Obverse:* Diademed head of Zeus Ammon to r.

*Reverse:* ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΩΣ. Eagle standing to l. upon a thunderbolt. In l. field, club. Between legs, ΔΙ.

*Reference:* Svoronos, no. 1129.

*Excavator's Reference:* 3479

II.12 Tyre, Ptolemy IV, 221–204 BC, AE 34<sup>36</sup>

*Obverse:* Similar.

34. [Coin not located in University of Pennsylvania Museum.]

35. [Coin not located in University of Pennsylvania Museum.]

36. [Coin not located in University of Pennsylvania Museum.]

*Reverse:* Similar.

*Reference:* Svoronos, no. 1130.

*Excavator's Reference:* 3478

### The Roman Empire

#### II.13 Tripolis, Aurelian, 270–275 AD, AE 22.5, 2.9 g

*Obverse:* IMP C AVRELIANVS AVG. Radiate, draped bust r.

*Reverse:* RESTITVT ORBIS. Victory to r. offering wreath to the Emperor standing l. In the exergue, KA.

*Reference:* Cohen, VI, p. 196, no. 194.

*Excavator's Reference:* 3085

*Accession Number:* 29.108.892

Plate 4, no. 47

#### II.14 Antioch, Probus, 276–282 AD, AE 22.5, 3.0 g

*Obverse:* IMP C M AVR PROBVS P F AVG. Radiate, draped bust to r.

*Reverse:* CLEMENTIA TEMP. Emperor with sceptre standing to r. and receiving globe from Jupiter standing l. In field, star (?). In the exergue, XXI.

*Reference:* Cohen VI, p. 264, no. 91.

*Excavator's Reference:* 608(a)

*Accession Number:* 29.108.893

Plate 4, no. 48

#### II.15 Siscia, Carinus, 283–285 AD, AE 22, 3.8 g

*Obverse:* IMP C M AVR CARINVS P F AVG. Radiate, cuirassed bust to r.

*Reverse:* VOTA PVBLICA. Carinus and Numerian sacrificing over altar between them. In the background, two military standards. In the exergue, SMS XXIB.

*Reference:* Cohen VI, p. 403, no. 194.

*Excavator's Reference:* 3335

*Accession Number:* 29.108.894

Plate 4, no. 49

#### II.16 Siscia, Constantine the Great, 330–337 AD, AE 18, 2.7 g

*Obverse:* VRBS ROMA. Helmeted, draped bust of Roma to l.

*Reverse:* Wolf to l. with Romulus and Remus. Above, 2 stars. In the exergue, SIS.

*Reference:* Cohen VII, p. 330, no. 17.

*Excavator's Reference:* 3132

*Accession Number:* 29.108.895

Plate 4, no. 50

II.17 Antioch, Constantine the Great, 330–337 AD, AE 17.5, holed in ancient times, 2.4 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar, except that in the exergue, SMANΘ.

*Excavator's Reference:* [none]

*Accession Number:* 29.108.896

Plate 4, no. 51

II.18 Thessalonica, Constans I, 337–350 AD, AE 15, 1.2 g

*Obverse:* CONSTANS P F AVG. Diademed, draped bust r.

*Reverse:* (VICTOR) IAE DD AVGG Q NN. Two victories vis-à-vis. In the exergue, (SM)TSB.

*Reference:* Cohen VII, p. 431, no. 176.

*Excavator's Reference:* 3418

*Accession Number:* 29.108.897

Plate 4, no. 52

II.19 Nicomedia, Constantius II, 337–361 AD, issued between 333 and 337 AD, AE 16, 1.4 g

*Obverse:* FL IVL CONSTANTIVS NOB C. Laureate, draped bust r.

*Reverse:* GLORIA EXERCITVS. Military standard flanked by two soldiers. In the exergue, SMN-.

*Reference:* Cohen VII, p. 455, no. 92.

*Excavator's Reference:* 1008(a)

*Accession Number:* 29.108.898

Plate 4, no. 53

II.20 Uncertain Mint, Constantius II, 337–361 AD, AE 14, 2.2 g

*Obverse:* ..CON..... Diademed, draped bust r.

*Reverse:* FEL TEMP (REPARATIO). Emperor to l. spearing fallen horseman. The exergual letters are illegible.

*Reference:* Cohen VII, p. 447, no. 45.

*Excavator's Reference:* 3336

*Accession Number:* 29.108.899

Plate 4, no. 54

II.21 Alexandria, Constantius II (?), 337–361 AD, AE 13<sup>37</sup>

*Obverse:* Inscription obliterated. Draped bust r., probably of Constantius II.

*Reverse:* (SPES REI) PVBLICE. Figure, in helmet and armor, standing l. and holding globe in r., spear in l. In the exergue, ALEB.

*Reference:* Cohen VII, p. 468, no. 188.

*Excavator's Reference:* 608(c)

37. [Coin not located in University of Pennsylvania Museum.]

- II.22 Uncertain Mint, Julian II, 361–363 AD, AE 27, 8.5 g  
*Obverse:* Inscription obliterated. Diademed bust r., bearded.  
*Reverse:* Inscription and type obliterated.  
*Excavator's Reference:* 607(a)  
*Accession Number:* 29.108.900  
 Plate 4, no. 55
- II.23 Uncertain Mint, Julian II, 361–363 AD, AE 17.5, 2.3 g  
*Obverse:* .....ANVS NOB CAES. Cuirassed bust r.  
*Reverse:* .....ORVM (?). Emperor standing, facing to r., holds labarum in r. and rests l. on shield.  
*Excavator's Reference:* 1008(c)  
*Accession Number:* 29.108.901  
 Plate 4, no. 56
- II.24 Uncertain Mint, Valentinian I, 364–375 AD, AE 13.5, 1.9 g  
*Obverse:* D N VALENTINI..... Diademed, draped bust to r.  
*Reverse:* Inscription obliterated. Victory to l.  
*Excavator's Reference:* 608(b)  
*Accession Number:* 29.108.902  
 Plate 4, no. 57
- II.25 Uncertain Mint, Valentinian II, AD, AE 12, 0.8 g  
*Obverse:* .....ANVS P F AVG. Diademed, draped b.  
*Reverse:* Type and inscription completely obliterated.  
*Excavator's Reference:* 608(e)  
*Accession Number:* 29.108.903  
 Plate 4, no. 58
- II.26 Uncertain Mint, Valentinian II, AD, AE 11, 1.4 g  
*Obverse:* D N VALENTINIANVS. Diademed, draped bust r.  
*Reverse:* Traces can be seen of Victory to l. dragging captive.  
*Reference:* Cohen VIII, p. 143, no. 30.  
*Excavator's Reference:* 608(g)  
*Accession Number:* 29.108.904  
 Plate 4, no. 59
- II.27 Uncertain Mint, Theodosius I, 379–395 AD, AE 12, 0.8 g  
*Obverse:* .....ODOSIVS P.... Diademed, draped bust to r.  
*Reverse:* Type and inscription completely obliterated.  
*Excavator's Reference:* 1008(b)  
*Accession Number:* 29.108.905  
 Plate 4, no. 60



## II.28 Uncertain Mint, Uncertain Emperor, late fourth century AD, AE 13.5, 1.2 g

*Obverse:* Inscription obliterated. Traces of the imperial bust to r.*Reverse:* ....AVGG. Roma (?) enthroned, facing, head turned l.*Excavator's Reference:* 608(d)*Accession Number:* 29.108.906

Plate 4, no. 61

## II.29 Uncertain Mint, Uncertain Emperor, late fourth century AD, AE 11, 1.2 g

*Obverse:* .....IVS.... Diademed bust (possibly Theodosius I ?) to r.*Reverse:* (SALVS REIPVB)LICE. Victory to l. dragging captive.*Excavator's Reference:* 608(f)*Accession Number:* 29.108.907

Plate 4, no. 62

## II.30 Uncertain Mint, Uncertain Emperor, late fourth century AD, AE 15.5, 1.6 g

*Obverse:* Completely obliterated.*Reverse:* Completely obliterated. The fabric could equally suggest either the first century BC or the fourth century AD.*Excavator's Reference:* 3224*Accession Number:* 29.108.908

Plate 4, no. 63

## II.31–II.35 Uncertain Mint, Uncertain Emperor, AE 16, 14, 13, 12, 11.5 mm

*Obverse:* On some of these pieces faint traces of the imperial bust can still be distinguished.*Reverse:* Inscriptions and types on all five pieces are completely obliterated.*Excavator's Reference:* 1008(d), (e), (f), (g), (h)*Accession Number:* 29.108.909a, b, c, d, e

## Byzantine Empire

## II.36 Constantinople, Anastasius I, 491–518 AD, AE 22.5 follis, 6.3 g

*Obverse:* Inscription very faint. Diademed, draped bust to r.*Reverse:* Large M. On l., star; above, cross; on r., ?; beneath, Ε. In the exergue, CON*Reference:* BMC Byz., p. 6, no. 40.*Excavator's Reference:* 608(h)*Accession Number:* 29.108.910

Plate 5, no. 64

## II.37 Constantinople, Anastasius I or Justin I, AE 29.5 follis, 11.3 g

*Obverse:* Type and inscription completely obliterated.

*Reverse:* Similar to preceding but of larger module. Only the star and the mark of value are to be seen.

*Excavator's Reference:* 273

*Accession Number:* 29.108.911

Plate 5, no. 65

II.38 Uncertain Mint, Anastasius I or Justin I, AE 21 twenty nummia

*Obverse:* Type and inscription completely obliterated.

*Reverse:* Large K. On l., cross.

*Excavator's Reference:* 43-15-309

*Accession Number:* 32.15.340

II.39 Constantinople (?), Justin I, 518–527 AD, AE 12.5 five nummia, 1.3 g

*Obverse:* Type and inscription obliterated.

*Reverse:* Large "chrisma", flanked by A and E (?).

*Reference:* BMC Byz., p. 16, nos. 40–8.

*Excavator's Reference:* 608(1)

*Accession Number:* 29.108.912

Plate 5, no. 66

II.40 Constantinople, Justinian I, 527–565 AD, AE 30 follis, 16.7 g

*Obverse:* D N IVSTINIANVS PP AVG. Diademed, draped bust r.

*Reverse:* Large M. On l., star; above, cross; on r., cross; beneath, Γ. In the exergue, CON.

*Excavator's Reference:* 548

*Accession Number:* 29.108.913

Plate 5, no. 67

II.41 Antioch, Justinian I, 527–565 AD, AE 30 follis, 11.3 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding except that in the exergue is +THEU Ɱ +.

*Reference:* BMC Byz., p. 54, nos. 273–74.

*Excavator's Reference:* 137

*Accession Number:* 29.108.914

Plate 5, no. 68

II.42 Constantinople, Justinian I, 527–565 AD, 21st regnal year, AE 18 ten nummia, 2.5 g

*Obverse:* .....IA.... Diademed bust to r.

*Reverse:* Large I, surmounted by a cross. On l., ANNO. On r., (X)XI. In the exergue, CON.

*Reference:* Cf. BMC Byz., p. 38, nos. 126ff.

*Excavator's Reference:* 608(p)  
*Accession Number:* 29.108.915  
 Plate 5, no. 69

II.43 Constantinople, Justinian I, 527–565 AD, regnal year 33, AE 14 ten nummia, 2.2 g

*Obverse:* Restruck on a coin similar to no. II.39. The outlines of the “chrisma” are plainly visible.

*Reverse:* Similar to the preceding but the date is XXXIII.

*Reference:* BMC Byz., p. 39, no. 137.

*Excavator's Reference:* 608(aa)

*Accession Number:* 29.108.916

Plate 5, no. 70

II.44 Cyzicus, Justinian I, 527–565 AD, AE 14 ten nummia, 1.5 g

*Obverse:* Inscription obliterated. Imperial bust r.

*Reverse:* Similar to the preceding, but the date is XXXII. In the exergue, KYZ.

*Reference:* Not in BMC Byz.

*Excavator's Reference:* 608(o)

*Accession Number:* 29.108.917

Plate 5, no. 71

II.45 Nicomedia, Justinian I, 527–565 AD, regnal year 30, AE 15 ten nummia, 2.7 g

*Obverse:* Similar to the preceding. Traces of the inscription.

*Reverse:* Similar to the preceding, but the date is XXX. In the exergue, NIK.

*Reference:* BMC Byz., p. 49, no. 228.

*Excavator's Reference:* 608(n)

*Accession Number:* 29.108.918

Plate 5, no. 72

II.46 Uncertain Mint, Justinian I, 527–565 AD, AE 14, 1.7 g

*Obverse:* Similar.

*Reverse:* Similar but date and mint illegible.

*Excavator's Reference:* 608(m)

*Accession Number:* 29.108.919

Plate 5, no. 73

II.47 Constantinople, Justinian I, 527–565 AD, AE 13.5 five nummia, 2.1 g

*Obverse:* D N IVSTIN.....S PP AVG. Diademed, draped bust to r.

*Reverse:* Large Ε. To r., cross.

*Reference:* Variety of BMC Byz., p. 40, nos. 146–59.

*Excavator's Reference:* 608(i)

*Accession Number:* 29.108.920

Plate 5, no. 74

II.48 Alexandria, Justinian I, 527–565 AD, AE 16, 2.3 g

*Obverse:* Similar.

*Reverse:* Large I B, between which is a cross. In the exergue, ΑΛΕΞ.

*Reference:* BMC Byz., p. 62, nos. 342 ff.

*Excavator's Reference:* 3154

*Accession Number:* 29.108.921

Plate 5, no. 75

II.49 Constantinople, Justin II, 565–578 AD, regnal year 10, AE 29.5 follis, 10.5 g

*Obverse:* ...STI..... Justin II and Sophia seated facing on throne.

*Reverse:* Large M. On l., ANNO; on r., X; above, cross; beneath, Γ. In the exergue, CON. *Reference:* BMC Byz., p. 81, nos. 71–75.

*Excavator's Reference:* 3422

*Accession Number:* 29.108.922

Plate 5, no. 76

II.50 Uncertain Mint, Justin II, 565–578 AD, AE 32 follis

*Obverse:* Similar to the preceding, but very faint.

*Reverse:* Similar to the preceding, but accessories, such as mint and date are illegible.

*Excavator's Reference:* 32-15-305

*Accession Number:* 31.15.336a

II.51 Uncertain Mint, Justin II, 565–578 AD, AE 31 follis

*Obverse:* Similar to the preceding, but very faint.

*Reverse:* Similar to the preceding, but accessories, such as mint and date are illegible.

*Excavator's Reference:* 32-15-305

*Accession Number:* 31.15.336b

II.52 Nicomedia, Justin II, 565–578 AD, 10th regnal year, AE 29.5 follis, 12.1 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding. On l., ANNO; on r. X; above, cross; beneath, A; in the exergue, NIKO.

*Reference:* BMC Byz., p. 88, no. 149.

*Excavator's Reference:* 3425

*Accession Number:* 29.10.923

Plate 5, no. 77

- II.53 Nicomedia, Justin II, 565–578 AD, 11th regnal year, AE 30 follis  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding, but with XI on r. and B beneath  
*Reference:* BMC Byz., p. 88, nos. 153–54.  
*Excavator's Reference:* 32.15-307  
*Accession Number:* 32.15.338
- II.54 Antioch, Justin II, 565–578 AD, 9th regnal year, AE 31 follis, 10.6 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding. To r., Ϟ III; beneath, Γ. In the exergue, THEUP'.  
*Reference:* BMC Byz., p. 93, nos. 204–05.  
*Excavator's Reference:* 3084  
*Accession Number:* 29.108.924A  
 Plate 6, no. 78
- II.55 Antioch, Justin II, 565–578 AD, 10th regnal year, AE 29 follis, 9.4 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding, but the date is X.  
*Reference:* BMC Byz., p. 93, nos. 207–08  
*Excavator's Reference:* 512  
*Accession Number:* 29.108.925A  
 Plate 6, no. 79
- II.56 Uncertain Mint, Justin II, 565–578 AD, AE 28, 6.4 g  
*Obverse:* Similar to the preceding, but almost illegible.  
*Reverse:* Practically obliterated.  
*Excavator's Reference:* 607(b)  
*Accession Number:* 29.108.926A
- II.57 Cyzicus ?, Justin II, 565–578 AD, regnal year 7, AE 23.5 twenty nummia, 5.8 g  
*Obverse:* Similar to the preceding but practically obliterated.  
*Reverse:* Large K. On l., ANNO; above, cross; on r., Ϟ I; beneath, K<sup>Y</sup>Z.  
*Reference:* Cf. BMC Byz., p. 91, no. 187.  
*Excavator's Reference:* 607(c)  
*Accession Number:* 29.108.925B  
 Plate 6, no. 80
- II.58 Antioch, Justin II, 565–578 AD, regnal year 10, AE 23 twenty nummia, 4.8 g  
*Obverse:* Similar to the preceding but practically obliterated.  
*Reverse:* Similar to the preceding, but on r., X; beneath, ϵ.

*Reference:* BMC Byz., p. 95, nos. 222–23.

*Excavator's Reference:* 608(k)

*Accession Number:* 29.108.926B

Plate 6, no. 81

II.59 Nicomedia, Tiberius II Constantine, 578–582 AD, regnal year 8, AE 30.5 follis, 12.2 g

*Obverse:* Inscription illegible. Bust of Tiberius (as Consul) facing, holding mappa and sceptre.

*Reverse:* Large M. On l. ANNO; above, cross; on r., ¶ II; In the exergue, NIKOB.

*Reference:* BMC Byz., p. 113, no. 70.

*Excavator's Reference:* 447

*Accession Number:* 29.108.924B

Plate 6, no. 82

II.60 Uncertain Mint, Tiberius II Constantine, 578–582 AD, AE 18.5 x 14 ten nummia

*Obverse:* Inscription illegible. Similar bust facing, but details are not clear.

*Reverse:* Large X. This coin could equally well be assigned to Phocas.

*Excavator's Reference:* "Special" A

*Accession Number:* none

II.61 Antioch, Mauricius Tiberius, 582–602 AD, regnal year 10, AE 22 twenty nummia, 6.9 g

*Obverse:* Inscription illegible. Bust facing of Mauricius as Consul holding mappa and sceptre.

*Reverse:* Large K. On l., ANNO; on r., X; beneath, e.

*Reference:* BMC Byz., p. 146, no. 201.

*Excavator's Reference:* 3307

*Accession Number:* 29.108.927

Plate 6, no. 83

II.62 Constantinople, Heraclius I, 610–641 AD, AE 28 follis, 8.8 g

*Obverse:* ..... RP AVG. Helmeted bust facing, probably of Heraclius I.

*Reverse:* Large M. On l., ANNO; beneath, E. In the exergue, CON. The date is obliterated.

*Reference:* BMC Byz., pp. 196–97, nos. 109–15.

*Excavator's Reference:* 32-15-308

*Accession Number:* 32.15.339a

Plate 6, no. 84

- II.63 Alexandria, Heraclius I, 610–641 AD, AE 14 six nummia, 3.4 g  
*Obverse:* Illegible inscription around a cross potent placed upon two steps.  
*Reverse:* Large S.  
*Reference:* BMC Byz., p. 228, nos. 308–14.  
*Excavator's Reference:* 608(j)  
*Accession Number:* 29.108.929  
 Plate 6, no. 85
- II.64 Uncertain Mint, Uncertain Emperor, AE 13, 2.7 g  
*Obverse:* Illegible. Probably, but not certainly, Byzantine.  
*Reverse:* Illegible.  
*Excavator's Reference:* 1008(i)  
*Accession Number:* 29.108.930b
- II.65 Uncertain Mint, Uncertain Emperor, AE 12, 1.3 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 1008(j)  
*Accession Number:* 29.108.930a
- II.66 Uncertain Mint, Uncertain Emperor, AE 16  
*Obverse:* Similar to the preceding. Types completely obliterated.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 32-15-308  
*Accession Number:* 32.15.339 b

#### Early Arabic Imitations

- II.67 Uncertain Mint, Imitation of coins of Constans II, square-shaped AE 16  
 follis, 3.6 g  
*Obverse:* Constans II standing, facing, holds long cross in r. and globe in l.  
*Reverse:* Large M. Traces of letters in field.  
*Reference:* BMC Byz., Pl. XXXI, nos. 15 and ff.  
*Excavator's Reference:* "Special" B  
*Accession Number:* 29.108.931  
 Plate 6, no. 86
- II.68 Uncertain Mint, AE 23, 4.0 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar. On l.,  $\text{A}$  ; on r.,  $\text{O}$ .  
*Excavator's Reference:* 581  
*Accession Number:* 29.108.932  
 Plate 6, no. 87

**II.69 Uncertain Mint, Octagonal AE 16.5, 2.1 g**

*Obverse:* Similar, but very crude.

*Reverse:* Similar. Portions of imitated letters in the field.

*Excavator's Reference:* 607(d)

*Accession Number:* 29.108.933

Plate 6, no. 88

**II.70 Uncertain Mint, AE 20.5, 3.7 g**

*Obverse:* Similar. The emperor's figure is more skillfully rendered.

*Reverse:* Large M surmounted by a cross. A pellet in each arch. In the exergue, S O Q.

*Excavator's Reference:* 608(q)

*Accession Number:* 29.108.934

Plate 6, no. 89

**II.71 Uncertain Mint, AE 19, 4.0g**

*Obverse:* Similar to the preceding.

*Reverse:* Large M. On the l., A. In the exergue, W b 9 l.

*Excavator's Reference:* 607(e)

*Accession Number:* 29.108.935

Plate 7, no. 90

**II.72 Uncertain Mint, AE 21, 4.2 g**

*Obverse:* Nearly obliterated, but traces of an imperial bust facing.

*Reverse:* Only the large M is distinguishable.

*Excavator's Reference:* 607(f)

*Accession Number:* 29.108.936

Plate 7, no. 91

**II.73 Damascus (?), AE 21, 3.9g**

*Obverse:* Standing, facing figure of the emperor.

*Reverse:* Similar to the preceding. In the exergue appear to be traces of ΔAM(?).

*Excavator's Reference:* 608(t)

*Accession Number:* 29.108.937

Plate 7, no. 92

**II.74 Uncertain Mint, AE 19, 4.1 g**

*Obverse:* Emperor, facing, enthroned.

*Reverse:* Large M, surmounted by a cross and with annulets in the arches. On the r., Ψ. Traces of letters in field and exergue.

*Excavator's Reference:* 607(g)

*Accession Number:* 29.108.938

Plate 7, no. 93



## II.75 Uncertain Mint, AE 18.5, 5.2 g

*Obverse:* Emperor standing, facing and holding long cross in r. On the l.,

بسماله

*Reverse:* Similar to the preceding. On the r., V (?).

*Excavator's Reference:* 608(u)

*Accession Number:* 29.108.939

Plate 7, no. 94

## II.76 Uncertain Mint, AE 18, 4.2g

*Obverse:* Three imperial figures standing, facing.

*Reverse:* Large M, surmounted by a cross. Beneath, A. From r. to l. (clock-wise), محمد رسول الله

*Reference:* BMC Or. IX, p. 8, no. 27.

*Excavator's Reference:* 608(r)

*Accession Number:* 29.108.940

Plate 7, no. 95

## II.77 Tiberias, AE 20, 2.9 g

*Obverse:* Similar to the preceding.

*Reverse:* Large M. Beneath, C. On l., TH...AΔO. On r., طبرية

*Reference:* BMC Or. IX, p. 8, nos. 24-5.

*Excavator's Reference:* 607(h)

*Accession Number:* 29.108.941

Plate 7, no. 96

## II.78 Tiberias, AE 21, 2.9 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar, but, beneath, Θ. On l., THBEPAAO. On r., طبرية

*Reference:* BMC Or. IX, p. 8, nos. 24-25.

*Excavator's Reference:* 608(s)

*Accession Number:* 29.108.942

Plate 7, no. 97

## The Ommayade Dynasty

## II.79 Uncertain Mint, AE 17, 1.9 g

*Obverse:* Stag, of "Sassanid" type, reclining to l. Around, لا اله الا الله وحده

*Reverse:* محمد / رسول / الله in three lines within an ornamental border composed of two concentric circles united by seven (?) annulets.

*Excavator's Reference:* 607(i)

*Accession Number:* 29.108.943

Plate 7, no. 98

**II.80 Uncertain Mint, AE 20.5, 2.7 g**

*Obverse:* [sic]... لا اله الا الله وحده / ٥ ا

*Reverse:* الله / رسول / محمد in three lines. Thin, spread fabric.

*Excavator's Reference:* 608(v)

*Accession Number:* 29.108.944

Plate 7, no. 99

**II.81 Uncertain Mint, AE 16, 4.1 g**

*Obverse:* لا اله الا الله / وحده in three lines.

*Reverse:* الله / رسول / محمد in three lines, crescent above. Thick fabric.

*Reference:* Cf. BMC Or. I, p. 174, nos. 4 ff.

*Excavator's Reference:* 607(j)

*Accession Number:* 29.108.945

Plate 7, no. 100

**II.82 Uncertain Mint, AE 20, 3.5 g**

*Obverse:* Similar to the preceding.

*Reverse:* Similar, but apparently without the crescent.

*Reference:* BMC Or. I, p. 174, no. 4.

*Excavator's Reference:* 608(w)

*Accession Number:* 29.108.946

Plate 7, no. 101

**II.83 Uncertain Mint, AE 17.5, 2.9 g**

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Reference:* BMC Or. I, p. 174, no. 4.

*Excavator's Reference:* 608(x)

*Accession Number:* 29.108.947

Plate 7, no. 102

**II.84 Uncertain Mint, AE 17, 2.2 g**

*Obverse:* Similar, but badly double-struck.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(y)

*Accession Number:* 29.108.948

Plate 7, no. 103

**II.85 Uncertain Mint, AE 14.5, 1.9 g**

*Obverse:* Similar, but smaller.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(bb)

*Accession Number:* 29.108.949

Plate 7, no. 104

II.86 Uncertain Mint, AE 12.5, 1.6 g

*Obverse:* Similar, but struck on small, dumpy planchet, too small for the dies.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(cc)

*Accession Number:* 29.108.950

Plate 7, no. 105

II.87 Uncertain Mint, AE 12.5, 2.1 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(dd)

*Accession Number:* 29.108.951

Plate 7, no. 106

II.88 Uncertain Mint, AE 12.5, 1.9 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(ee)

*Accession Number:* 29.108.952

Plate 7, no. 107

II.89 Uncertain Mint, AE 12.5, 2.6 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(ff)

*Accession Number:* 29.108.953

Plate 8, no. 108

II.90 Uncertain Mint, AE 14, 1.6 g

*Obverse:* Similar, but planchet not so thick.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 607(q)

*Accession Number:* 29.108.954

Plate 8, no. 109

II.91 Uncertain Mint, AE 13, 1.3 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(gg)

*Accession Number:* 29.108.955

*Plate 8, no. 110*

**II.92 Uncertain Mint, AE 14, 2.6 g**

*Obverse:* Similar, but inscription is divided: لا اله / الا الله و / حده

*Reverse:* Similar to the preceding. Thick planchet.

*Excavator's Reference:* 608(z)

*Accession Number:* 29.108.956

*Plate 8, no. 111*

**II.93 Uncertain Mint, AE 13, 1.7 g**

*Obverse:* الله / رسول / محمد in three lines.

*Reverse:* Same inscription as on the preceding.

*Reference:* Cf. BMC Or. I, p. 175, no. 13.

*Excavator's Reference:* 608(hh)

*Accession Number:* 29.108.957

*Plate 8, no. 112*

**II.94 Uncertain Mint, AE 19, 3.7 g**

*Obverse:* لا اله / الا الله / وحده in three lines within an ornamental border composed of two concentric circles joined by annulets.

*Reverse:* الله / رسول / محمد in three lines within a border of two concentric circles containing an illegible inscription.

*Reference:* Cf. Paris, no. 1354.

*Excavator's Reference:* 607(s)

*Accession Number:* 29.108.958

*Plate 8, no. 113*

**II.95 Uncertain Mint, AE 14, 2.2 g**

*Obverse:* لا اله الا / الله وحد / لا شر .. in three lines within a border as on the preceding.

*Reverse:* Uncertain curved object in the field, surrounded by an inscription of which only بسماله remains on the flan.

*Excavator's Reference:* 608(ii)

*Accession Number:* 29.108.959

*Plate 8, no. 114*

**II.96 Uncertain Mint, AE 18, 3.2 g**

*Obverse:* Legends illegible.

*Reverse:* Central, illegible legend within a double circle. Above legend, ن.

*Excavator's Reference:* 607(p)

*Accession Number:* 29.108.960

*Plate 8, no. 115*

## II.97 Amman, AE 19, 5.3 g

*Obverse:* لا اله الا الله / وحده in three lines within border composed of two linear circles connected by several perpendicular lines.

*Reverse:* Fleur-de-lys ornament surrounded by محمد رسول الله عمان

*Reference:* Cf. BMC Or. I, p. 184, no. 54.

*Excavator's Reference:* 32-15-310

*Accession Number:* 32.15.341B

Plate 8, no. 116

## II.98 Uncertain Mint, AE 13, 1.1 g

*Obverse:* Completely illegible.

*Reverse:* Completely illegible.

*Excavator's Reference:* 32-15-310

*Accession Number:* 32.15.341A

## II.99 Damascus, AE 15, 2.2 g

*Obverse:* لا اله الا الله / وحده in three lines within triple circle.

*Reverse:* ضرب / هذا الفليس / بدمشق in three lines within double circle, at top.

*Reference:* Variety of Paris no. 1447.

*Excavator's Reference:* 607(I)

*Accession Number:* 29.108.961

Plate 8, no. 117

## II.100 Damascus, AE 14, 1.7 g

*Obverse:* Similar to the preceding but partially illegible.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(nn)

*Accession Number:* 29.108.975

Plate 8, no. 118

## II.101 Lydda (?), AE 25, 4.4g

*Obverse:* لا اله الا الله / وحده in three lines within a circle. Around الله الملك فليس واف

*Reverse:* محمد / رسول / الله in three lines within linear circle. Around, branch and (Arabic). Similar to Paris No. 1504 but the name ضرب بفلسطين is missing. The mint might therefore be Jerusalem.

*Reference:* Similar to Paris No. 1504.

*Excavator's Reference:* 3465

*Accession Number:* 29.108.962

Plate 8, no. 119

## II.102 Jordan (District of), AE 20, 4.7 g

*Obverse:* لا اله الا الله / وحده in three lines, within a linear circle.

*Reverse:* بسم الله ضرب [.... بالا] ردن, محمد / رسول / الله in three lines, around which,

*Reference:* Paris no. 1385

*Excavator's Reference:* 608(mm)

*Accession Number:* 29.108.963

Plate 8, no. 120

II.103 Tiberias, AE 18.5, 4.6 g

*Obverse:* لا اله الا الله / وحده in three lines within double (or triple?) circle.

*Reverse:* بسم الله ضرب هذا الفلّس بطبرية, محمد / رسول / الله in three lines, surrounded by,

بسم الله ضرب هذا الفلّس بطبرية

*Reference:* BMC Or. I, p. 183, no. 52.

*Excavator's Reference:* 607(o)

*Accession Number:* 29.108.964

Plate 8, no. 121

II.104 Tiberias (?), AE 17, 4.8 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding but the mint name is off flan.

*Excavator's Reference:* 607(n)

*Accession Number:* 29.108.965

Plate 8, no. 122

II.105 Tiberias, AE 21, 4.0 g

*Obverse:* Similar. As the fabric is more spread the triple circle is certain.

*Reverse:* Same inscription as on No. 103.

*Excavator's Reference:* 607(m)

*Accession Number:* 29.109.966

Plate 8, no. 123

II.106 Tiberias, AE 21, 3.9 g

*Obverse:* لا اله الا الله / حد الله / الصمد in three lines, around which,

لا اله الا الله وحده لا شريك له.

*Reverse:* Branch. On l., محمد / رسول / الله in three lines, around which,

بسم الله ضرب هذا الفلّس بطبرية

*Reference:* BMC Or. I, p. 183, no. 53.

*Excavator's Reference:* 607(r)

*Accession Number:* 29.108.967

Plate 9, no. 124

II.107 Uncertain Mint, AE 24.5, 4.2 g

*Obverse:* Similar to No. 105.

*Reverse:* Similar to 105, except that the mint name is certainly not Tiberias.

*Excavator's Reference:* 607(u)

*Accession Number:* 29.108.968

Plate 9, no. 125

II.108 Damascus ?, AE 24.5, 3.9 g

*Obverse:* Similar to the preceding.

*Reverse:* الله / رسول / محمد in three lines within a circle. Around, بسو الله ضرب هذا ..... بدمشق The mint name is very uncertain, due to corrosion.

*Reference:* Cf. Paris, nos. 1432–34.

*Excavator's Reference:* 607(t)

*Accession Number:* 29.108.969

Plate 9, no. 126

II.109 Uncertain Mint, AE 20.5, 3.0 g

*Obverse:* Practically illegible. Religious text, as above, within circle and surrounding inscription.

*Reverse:* Practically illegible. الله / رسول / محمد in three lines, within a circle and illegible marginal inscription.

*Excavator's Reference:* 607(v)

*Accession Number:* 29.108.970

Plate 9, no. 127

II.110 Tiberias, AE 17, 4.5 g

*Obverse:* لا اله الا الله / وحده in three lines. Marginal inscription, امر عبد الله ..... امير المؤمنين

*Reverse:* الله / رسول / محمد in three lines. Marginal inscription, بسم الله ..... الفلاس بطبرية

*Excavator's Reference:* 607(k)

*Accession Number:* 29.108.974

Plate 9, no. 128

II.111 Uncertain Mint, AE 21, 3.1 g

*Obverse:* Similar to the preceding. Marginal inscription, امر عبد الله ..... امير المؤمنين بالومل

*Reverse:* Apparently similar to the preceding, but more or less illegible.

*Excavator's Reference:* 608(jj)

*Accession Number:* 29.108.972

Plate 9, no. 129

II.112 Uncertain Mint, AE18, 3.7 g

*Obverse:* Similar to the preceding.

*Reverse:* Similar to the preceding, but with a crescent above the central inscription. The marginal inscription apparently ends with the date,

سنة عشر ومية (i.e., 110 AH)

*Excavator's Reference:* 608(kk)

*Accession Number:* 29.108.971

Plate 9, no. 130

II.113 Uncertain Mint, AE 17, 2.9 g

*Obverse:* Religious text, as above, in center; circle and illegible inscription around.

*Reverse:* الله / رسول / محمد in three lines within a dotted circle. Marginal inscription apparently, امر عبد الله ..... المؤمنين

*Excavator's Reference:* 32-15-312

*Accession Number:* 32.15.343

Plate 9, no. 131

II.114 Tiberias, AE 17.5, 3.8 g

*Obverse:* وحده / لا اله الا الله / وحده in three lines, with illegible marginal inscription around.

*Reverse:* الله / رسول / محمد in three lines, with a couched lion upwards on the r.<sup>38</sup>

*Excavator's Reference:* "Special" C

*Accession Number:* 29.108.976

Plate 9, no. 132

II.115 Tiberias, AE 16, 3.7 g

*Obverse:* Similar. The marginal inscription commences with [?].

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 608(II)

*Accession Number:* 29.108.977

Plate 9, no. 133

II.116 Uncertain Mint, AE 17, 1.1 g

*Obverse:* الله / رسول / محمد / محمد and an uncertain word [?] in four lines within a linear circle.

*Margin:* ..... سنة تسع و ستين

*Reverse:* بن عيسى / لا اله الا الله / وحده / لا شريك له / نصر بن؟ in five lines within a linear circle. This coin was struck by the Emir Mohamed ben Isa.

*Reference:* Paris, nos. 1667–8

*Excavator's Reference:* 3225

*Accession Number:* 29.108.978

Plate 9, no. 134

II.117 Uncertain Mint, AE 17, 1.0 g broken

*Obverse:* Similar to the preceding. Mostly illegible.

38. There exist two specimen of this coin in the collection of the American Numismatic Society which show the mint name طبرية.



*Reverse:* Similar to the preceeding. Mostly illegible.

*Excavator's Reference:* 257

*Accession Number:* 29.108.979

II.118 Uncertain Mint, AE 13, 0.7 g

*Obverse:* Similar to the preceeding.

*Reverse:* Similar to the preceeding.

*Excavator's Reference:* 608(00)

*Accession Number:* 29.108.980

II.119 Uncertain Mint, AE 13.5, 0.8 g

*Obverse:* Similar to the preceeding.

*Reverse:* Similar to the preceeding.

*Excavator's Reference:* 3223

*Accession Number:* 29.108.982

#### The Fatimide Dynasty

II.120 Uncertain Mint, El Musta'ly, 487-495 AH, AE 19.5, 2.0 g

*Obverse:* *الله / وحده* surrounded by a double linear circle and an illegible marginal inscription.

*Reverse:* *الله / رسول / محمد* surrounded by a double linear circle and a more or less illegible marginal inscription.

*Excavator's Reference:* 3270

*Accession Number:* 29.108.983

Plate 9, no. 135

#### Uncertain Issue

II.121 Uncertain Mint, Seljuk or Early Mamluke, AE 20.5, 4.0 g

*Obverse:* ... *السلطان* in two lines.

*Reverse:* Two lines of illegible inscription.

*Excavator's Reference:* 1008(k)

*Accession Number:* 29.108.984

Plate 9, no. 136

## Bahri Mamlukes

- II.122 Uncertain Mint, Seyf-ed-din Hajji, 747–748 A.H., AE 17, 2.3 g  
*Obverse:* Fleur-de-lys, flanked by four pellets, within a linear circle.  
*Reverse:* حاجي in linear circle. Portions of the surrounding inscription only partially visible.  
*Excavator's Reference:* 607(w)  
*Accession Number:* 29.108.973  
 Plate 9, no. 137
- II.123 Uncertain Mint, 1.0 g  
*Obverse:* Illegible.  
*Reverse:* Illegible.  
*Excavator's Reference:* 608(pp)  
*Accession Number:* 29.108.981
- II.124 Uncertain Mint, 1.9 g  
*Obverse:* Illegible.  
*Reverse:* Illegible.  
*Excavator's Reference:* 3297  
*Accession Number:* 29.108.985

COINS FROM THE EXCAVATIONS AT BEISAN III [1929]<sup>39</sup>

The following seventy-four coins from the cemetery excavations at Beisan were forwarded to the writer on February 1, 1936, by the University Museum, University of Pennsylvania.

In describing the individual coins, references are made to the following standard works:

Abbr.	Authority
Mion. Suppl.	<i>Descripton de medailles antiques</i> . Supplement. Vol. IV. Paris, 1829, T.E. Mionnet.
BMC Phoenicia	<i>Catalogue of the Greek Coins in the British Museum. Phoenicia</i> . G.F. Hill. 1910.
BMC Palestine	<i>Catalogue of the Greek Coins in the British Museum. Palestine</i> . G.F. Hill. 1924.
BMC Arabia	<i>Catalogue of the Greek Coins in the British Museum. Arabia, Mesopotamia, Persia</i> . G.F. Hill. 1922.
Cohen VII, VIII	<i>Description historique des monnaies frappées sous l'empire Romain</i> . Vols. VII and VIII. Henry Cohen.

39. [Based on accession numbers, these appear to be coins from the 1929, or earlier, seasons.]

- Sabatier *Description général des monnaies Byzantines*. J. Sabatier. Paris. 1862
- BMC I *Catalogue of the Imperial Byzantine Coins in the British Museum*. Vol.I. Warwick Wroth. 1908.
- Paris I *Catalogue des monnaies Musulmanes de la Bibliothèque Nationale*. Henri Lavoix. 1887.

## A) Greek and Greco-Roman

## Arcadia

## III.1 Pheneus, Caracalla, AE 21, 3.3 g

*Obverse*: L . AVP (ANTWNINOC). Laureate head of Caracalla to r.

*Reverse*: (ΦΕ)ΝΕΑ(TWN). Hermes standing l., holds caduceus in r. and purse in lowered r.

*Reference*: Mion.Suppl.IV, p. 286, no. 83.

*Excavator's Reference*: 942

*Accession Number*: 29.108.986

Plate 10, no. 138

Note the appearance of imperial coins of the period of the Severi from Peloponnesian mints at Dura-Europus (*The Excavations at Dura-Europus. Preliminary Report of Third Season of Work, 1929-1930*, p. 146). Dr. Bellinger proposes to give an interesting discussion of this phenomenon in his forthcoming description of the "Seventh Dura Hoard."<sup>40</sup>

## Phoenicia

## III.2 Tyre, 16-17 AD, AE 20, 6.8 g

*Obverse*: Veiled and turreted bust of Tyche r.

*Reverse*: PMB 𐤓𐤁𐤁𐤁 A 𐤁𐤁 IEP A in two lines above a galley to l. Exergue, 𐤓𐤁𐤁𐤁

*Reference*: BMC Phoenicia, variety of nos. 256-57.

*Excavator's Reference*: 1257

*Accession Number*: 29.108.885b

Plate 10, no. 139

## Palestine

## III.3 Jerusalem, First Revolt Year 2, AE 19, 2.2 g

*Obverse*: שנת שתיים Amphora.

*Reverse*: חרת ציון Vine branch.

40.[A. R. Bellinger, *The Sixth, Seventh, and Tenth Dura Hoards*, Numismatic Notes and Monographs No. 69, The American Numismatic Society, New York, 1935.]

*Reference:* BMC Palestine, p. 272–73, nos. 22–40.

*Excavator's Reference:* 1144

*Accession Number:* 29.108.987

Plate 10, no. 140

#### Province of Arabia

#### III.4 Bostra, Alexander Severus, 222–235, AE 21.5, 5.0 g. Holed in antiquity.

*Obverse:* (IMP CAES M AV)R SEV ALE(XANDER AVG): Laureate, draped bust r.

*Reverse:* COLONIA BOSTRA. Draped, turreted bust of City-goddess l. with cornucopiae behind shoulder.

*Reference:* BMC Arabia, p. 21. nos. 22–24.

*Excavator's Reference:* 1604

*Accession Number:* 29.108.988

Plate 10, no. 141

#### III.5 Philadelphia, 164–65 AD, AE 16, 3.0 g

*Obverse:* ΦΙΛ . ΚΟΙ . ΚΡΙΑΣ. Veiled bust of Demeter to r.

*Reverse:* ΕΤΟΥΚ ΖΚΚ. Wicker basket containing two ears of wheat between two serpents.

*Reference:* BMC Arabia, p. 37, nos. 2–3.

*Excavator's Reference:* 1308

*Accession Number:* 29.108.888

Plate 10, no. 142

#### Illegible Coins of the Early Period

#### III.6 Phoenicia?, circa 1st cent. BC, AE 20, 4.4 g

*Obverse:* Vague outlines of a turreted head of City-goddess to r.

*Reverse:* Obliterated.

*Excavator's Reference:* 1071

*Accession Number:* 29.108.889

Plate 10, no. 143

#### III.7 Uncertain Mint, 1st c. BC to 1st c. AD, AE 22, 5.0 g

*Obverse:* Completely obliterated, but fabric appears to be early.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 1029

*Accession Number:* 29.108.989

#### III.8 Uncertain Mint, 1st to 2nd c. AD, AE 23, 7.9 g

*Obverse:* Completely obliterated, but fabric suggests the period.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 941

*Accession Number:* 29.108.990

III.9 Heliopolis ?, Circa 2nd c. AD, AE 21, 6.3 g

*Obverse:* Head of emperor (Hadrian? Septimius Severus?) to r.

*Reverse:* Veiled and turreted bust of City-goddess to l. with cornucopiae behind shoulder. The reverse type bears striking similarities to the earlier issues of Heliopolis, but what can be seen of the imperial head resembles Hadrian more than it does Severus, who was the first known emperor to coin at Heliopolis.

*Excavator's Reference:* 1736

*Accession Number:* 29.108.991

Plate 10, no. 144

III.10 Uncertain Mint, 3rd c. AD, AE 23, 7.9 g. The coin was holed in antiquity.

*Obverse:* Laureate, draped bust of a young emperor to r. The features appear to be those of Alexander Severus, though they might also be those of Elagabalus.

*Reverse:* Completely obliterated.

*Excavator's Reference:* 1255

*Accession Number:* 29.108.992

Plate 10, no. 145

III.11 Uncertain Mint, 3rd c. AD, AE 25, 7.2 g

*Obverse:* Vague outlines of imperial bust r.

*Reverse:* Completely obliterated. Fabric appears to be that of the third c. AD.

*Excavator's Reference:* 940

*Accession Number:* 29.108.993

Kings of Nabataea

III.12 Petra (probably), Aretas IV, 9 B.C. to 49 AD, AE 18<sup>41</sup>

*Obverse:* Busts of Aretas and Shaqilath r., jugate.

*Reverse:* Two cornucopiae crossed; between them remnants of the inscription: חרתת/שקילת

*Reference:* BMC Arabia, p. 8, nos. 14–22.

*Excavator's Reference:* 1072

41. [Coin not located in University of Pennsylvania Museum.]

## B) ROMAN IMPERIAL

- III.13 Uncertain Mint, Period of the Tetrarchy, AE 21, 3.0 g. The coin has been holed in antiquity.  
*Obverse:* Radiate, cuirassed bust of the Emperor (Diocletian or Maximian I) to r.  
*Reverse:* Vague outlines of two standing figures (Emperor and Jupiter?).  
*Excavator's Reference:* 973  
*Accession Number:* 29.108.994  
 Plate 10, no. 146
- III.14 Rome, Constantine I, 306–337 AD, AE 19, 2.5 g. Holed in antiquity.  
*Obverse:* Laureate, draped bust r.  
*Reverse:* SOLI INV ICTO COMITI. Sol standing facing with raised r. arm. In field A. Exergue, R S.  
*Reference:* Cohen VII, p. 290, no. 521.  
*Excavator's Reference:* 1182  
*Accession Number:* 29.108.995  
 Plate 10, no. 147
- III.15 Uncertain Mint, Sons of Constantine, After 337 AD, AE 14.5, 0.8 g. The coin has been holed in antiquity.  
*Obverse:* DV CONSTANTINVS PT AVG. Veiled head of Constantine to r.  
*Reverse:* The deified Constantine in quadriga to r.  
*Reference:* Cohen VII, p. 318, no. 760.  
*Excavator's Reference:* 1904  
*Accession Number:* 29.198.854a  
 Plate 10, no. 148
- III.16 Uncertain Mint, AE 14, 0.9 g. Holed in antiquity.  
*Obverse:* Completely obliterated as regards types.  
*Reverse:* Similar to the preceding.  
*Reference:* 29.108.854b  
*Excavator's Reference:* 1904  
*Accession Number:* 29.108.854b
- III.17 Uncertain Mint, AE 15, 0.9 g. Holed in antiquity.  
*Obverse:* Completely obliterated as regards types. Vague outlines of a bust which might be Constantius II or Constans may still be seen.  
*Reverse:* Obliterated.  
*Excavator's Reference:* 1904  
*Accession Number:* 29.108.854c

- III.18 Uncertain Mint, AE 15.5, 0.6 g. Holed in antiquity.  
*Obverse:* Completely obliterated as regards types.  
*Reverse:* Obliterated.  
*Excavator's Reference:* 1904  
*Accession Number:* 29.108.854d
- III.19 Uncertain Mint, Constantius II or Constans, AE 14.5, 0.7 g. Holed in antiquity.  
*Obverse:* .....N (or V) S. P F AVG. Diademed bust r.  
*Reverse:* VOT XX MVL T XXX in four lines within a wreath.  
*Reference:* Cohen VII, p. 435, no. 197 or p. 492, no. 335.  
*Excavator's Reference:* 1886  
*Accession Number:* 29.108.996  
 Plate 10, no. 149
- III.20 Uncertain Mint, Constantius II, 337–361 AD, AE 22, 3.7 g. Holed in antiquity.  
*Obverse:* ..... IVS P F AVG. Diademed, draped bust r.  
*Reverse:* FEL TEMP REP ARATIO. Emperor standing to l. on galley steered by Victory.  
*Reference:* Cohen VII, p. 446, no. 35.  
*Excavator's Reference:* 974  
*Accession Number:* 29.108.997  
 Plate 10, no. 150
- III.21 Uncertain Mint, Constantius II, 337–361 AD, AE 13, 1.3 g  
*Obverse:* Diademed, draped bust r.  
*Reverse:* Traces of similar inscription. Emperor to l. spearing fallen horseman.  
*Reference:* Cohen VII, p. 447, no. 47.  
*Excavator's Reference:* 991b  
*Accession Number:* 29.108.998  
 Plate 10, no. 151
- III.22 Uncertain Mint, Constantius II, 337–361 AD, AE 14, 1.8 g  
*Obverse:* Similar to the preceding, but types almost obliterated.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 1565  
*Accession Number:* 29.108.999
- III.23 Uncertain Mint, AE 15.5. Badly broken.  
*Obverse:* .....NSTANTI..... Types similar to the preceding.  
*Reverse:* Almost entirely obliterated.

*Excavator's Reference:* 950

*Accession Number:* 29.108.1000

III.24 Uncertain Mint, Constantius Gallus, 351–354 AD, AE 22, 5.4 g  
*Obverse:* D N FL CL CONSTANTIVS N(OB CAES). Draped bust r. with bare head.

*Reverse:* FEL TEMP REPARATIO. Emperor spearing fallen horseman.

*Reference:* Cohen VIII, p. 33, no. 11.

*Excavator's Reference:* 949

*Accession Number:* 29.108.1001

Plate 10, no. 152

III.25 Uncertain Mint, Valens, 364–378 AD, AE 15, 1.4 g

*Obverse:* .....P F AVG. Diademed, draped bust r.

*Reverse:* Victory advancing l. holding wreath in outstretched r. and palm in l. The coin is almost certainly an issue of Valens as the name is entirely to the l. of the bust.

*Reference:* Cohen VIII, p. 110, no. 47.

*Excavator's Reference:* 991a

*Accession Number:* 29.108.1002

Plate 11, no. 153

III.26 Uncertain Mint, Valens, 364–378 AD, AE 17.5, 1.2 g

*Obverse:* D N VALENS P F AVG. Diademed, draped bust r.

*Reverse:* GLORIA ROMANORVM. Emperor, holding labarum in l., advancing r. and dragging captive with r.

*Reference:* Cohen VIII, p. 103, no. 11.

*Excavator's Reference:* 1011a

*Accession Number:* 29.108.1003

Plate 11, no. 154

III.27 Uncertain Mint, Valentinian II, 375–392 AD, AE 11, 1.1 g

*Obverse:* .....NTINIAN.... Diademed, draped bust r.

*Reverse:* Traces of Victory advancing l. dragging captive.

*Reference:* Cohen VIII, p. 143, no. 30.

*Excavator's Reference:* 991c

*Accession Number:* 29.108.1005

Plate 11, no. 155

III.28 Uncertain Mint, Theodosius I, 379–395 AD, AE 13, 0.9 g

*Obverse:* D N THEODO..... Diademed, draped bust r.

*Reverse:* Same type as the preceding.



*Reference:* Cohen VIII, p. 158, no. 30.

*Excavator's Reference:* 991d

*Accession Number:* 29.108.1006

Plate 11, no. 156

III.29 Uncertain Mint, late fourth century AD, AE 16, 1.8 g

*Obverse:* Inscription obliterated. Vague outlines of a diademed, draped imperial bust r.

*Reverse:* SPES..... Helmeted and armed emperor standing facing. This may be a coin of Constantius II or Julian.

*Excavator's Reference:* 975

*Accession Number:* 29.108.1007

III.30 Uncertain Mint, late fourth century AD, AE 17, 1.6 g

*Obverse:* Similar to the preceding but even more damaged.

*Reverse:* Similar to the preceding.

*Excavator's Reference:* 951

*Accession Number:* 29.108.1008

III.31 Uncertain Mint, late fourth century AD, AE 14.5, 1.6 g

*Obverse:* Vague outline of imperial bust.

*Reverse:* Vague outline of victory advancing to l. Similar to no. 25. May be a coin of Valentinian I or Valens.

*Excavator's Reference:* 952

*Accession Number:* 29.108.1009

Plate 11, no. 157

III.32 Uncertain Mint, Arcadius, 395–408 AD, AE 19, 1.2 g. The coin has been pierced in antiquity.

*Obverse:* ..ARC.....AVG. Diademed, draped bust r.

*Reverse:* Inscription obliterated. Emperor standing l. crowned by Victory.

*Reference:* Type of Sabatier, Pl. IV, no. 17.

*Excavator's Reference:* 1181

*Accession Number:* 29.108.1010

Plate 11, no. 158

III.33 Uncertain Mint, late fourth century AD, AE 15, 1.0 g

*Obverse:* Completely obliterated. Fabric indicates the date.

*Reverse:* Completely obliterated.

*Excavator's Reference:* 1011c

*Accession Number:* 29.108.1011a

- III.34 Uncertain Mint, late fourth century AD, AE 15, 1.2 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 1011d  
*Accession Number:* 29.108.1011b
- III.35 Uncertain Mint, late fourth century AD, AE 12, 0.9 g  
*Obverse:* Types completely obliterated, but vague traces suggest coin similar to nos. 27 and 28 above.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 992  
*Accession Number:* 29.108.855a
- III.36 Uncertain Mint, late fourth century AD, AE 12, 0.9 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 992  
*Accession Number:* 29.108.855b
- III.37–39 Uncertain Mint, late fourth century AD, AE 10, 10.5, 11 mm. Weights 0.6, 0.3, 1.1 g  
*Obverse:* Types completely obliterated.  
*Reverse:* Types completely obliterated.  
*Excavator's Reference:* 1183  
*Accession Numbers:* 29.108.856a, b, c
- III.40 Uncertain Mint, late fourth century AD, AE 11.5, 0.7 g  
*Obverse:* Types completely obliterated.  
*Reverse:* Traces of victory and captive, similar to nos. 27 and 28, may still be made out.  
*Excavator's Reference:* 1183  
*Accession Number:* 29.108.856d
- III.41 Uncertain Mint, late fourth century AD, AE 16.5, 1.1 g. The coin has been holed in antiquity.  
*Obverse:* Types completely obliterated.  
*Reverse:* Types completely obliterated.  
*Excavator's Reference:* 1877  
*Accession Number:* 29.108.857
- III.42 Uncertain Mint, third century AD (?), AE 17.5, 2.7 g  
*Obverse:* Vague traces of an imperial bust on the obverse suggest an earlier date than any of the preceding.

*Reverse:* Entirely obliterated.  
*Excavator's Reference:* 1341  
*Accession Number:* 29.108.858

III.43 Uncertain Mint, late fourth century AD, AE 12.5, 0.7 g  
*Obverse:* Types entirely obliterated.  
*Reverse:* Types entirely obliterated.  
*Excavator's Reference:* 1271  
*Accession Number:* 29.108.859

III.44 Uncertain Mint, late fourth century AD, AE 15, 0.8 g  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 1093  
*Accession Number:* 29.108.860

III.45-48 Uncertain Mint, late fourth century AD, AE 11, 12, 14, 15.  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 979  
*Accession Number:* 29.108.861a, b, c, d

III.48a Uncertain Mint, late fourth century AD, AE 15  
*Obverse:* Similar to the preceding.  
*Reverse:* Similar to the preceding.  
*Excavator's Reference:* 979  
*Accession Number:* 29.108.861 b

III.49-66 Uncertain Mint, late fourth century AD, AE 12 to 17  
*Description:* The types on all these coins have been almost entirely obliterated though, here and there, vague traces of imperial busts may still be made out. Of the [eighteen] coins here included one has been holed in antiquity and one has been badly broken. There are also five minor fragments of coins.  
*Excavator's Reference:* 991  
*Accession Number:* 29.108.862 a-r

III.67 Uncertain Mint, late fourth century or early fifth century AD, AE 9.5, 0.8 g, broken.  
*Obverse:* Completely obliterated. Fabric points to the early [fifth century].  
*Reverse:* Completely obliterated.  
*Excavator's Reference:* 1770  
*Accession Number:* 29.108.1017b

III.68 Uncertain Mint, late fourth century or early fifth century AD, AE 14.5, 1.4 g

*Obverse:* Shows traces of the imperial bust.

*Reverse:* Standing figures of three emperors facing. This is probably a coin of Arcadius, Honorius or Theodosius II.

*Excavator's Reference:* 1770

*Accession Number:* 29.108.1017a

Plate 11, no. 159

C) Byzantine Empire

III.69 Uncertain Mint, Anastasius I, 491–518 AD, AE 20.5 twenty nummia, 3.8 g

*Obverse:* DN ANASTASIVS PP AVG. Diademed, draped bust r.

*Reverse:* Large K, with a cross on the l.

*Reference:* BMC I, p. 5, nos. 30–33.

*Excavator's Reference:* 832

*Accession Number:* 29.108.1012

Plate 11, no. 160

III.70 Alexandria, Maurice Tiberius, 582–602 AD, AE 14 twelve nummia, 1.6 g

*Obverse:* MAVR..... Draped bust r.

*Reverse:* Large I B, separated by a cross. Exergue, ΑΛΕΞ.

*Reference:* BMC I, p. 148, nos. 220–227.

*Excavator's Reference:* 967

*Accession Number:* 29.108.1013

Plate 11, no. 161

III.71 Alexandria, Uncertain Emperor, AE 14 twelve nummia, 0.9 g

*Obverse:* Traces of an imperial bust to r.

*Reverse:* As on the preceding coin. The emperor's name is unfortunately illegible.

*Excavator's Reference:* 1011b

*Accession Number:* 29.108.1004

Plate 11, no. 162

III.72 Uncertain Mint, Uncertain Emperor, AE 24 twenty nummia, 5.3 g

*Obverse:* Illegible.

*Reverse:* Only traces of the large K on the reverse remain visible.

*Excavator's Reference:* 1165

*Accession Number:* 29.108.1014

## D) Arabic

## III.73 Uncertain Mint, Amawi Caliphs, seventh century, AE 19 fals, 3.5 g

*Obverse:* Traces of (لا اله الا الله وحده) may be still be seen. The marginal inscriptions are completely obliterated.

*Reverse:* Traces of (ل الله) may still be seen.

*Excavator's Reference:* 1059

*Accession Number:* 29.108.1015

Plate 11, no. 163

## III.74 Tiberias, Amawi Caliphs, seventh century, AE 17.5 fals, 2.3 g

*Obverse:* Heart-shaped vase (?) with two tendrils within a circle of dots.

Around, لا اله الا الله وحده

*Reverse:* محمد رسول الله in two lines within a dotted circle. Around, محمد رسول الله

*Reference:* Paris I, p. 392, nos. 1484–1485.

*Excavator's Reference:* 986

*Accession Number:* 29.108.1016

Plate 11, no. 164

To be noted are the large number of coins among the preceding which have been pierced in ancient times. As all of the pieces come from the cemetery, it may be surmised that there was a common habit of wearing coins as amulets or keepsakes—or, possibly, it was the practice to place old, worn, or demonetized coins with the dead.

## A Hoard of Archaic Coins of Colophon and Unminted Silver (*CH* I.3)

PLATES 12–36

HENRY S. KIM\* AND JOHN H. KROLL\*\*

This hoard of the later 6th century BC consists of 903 minute silver coins in essentially two denominations, and 77 pieces of unminted silver, over half of which are small, unweighed disks apparently made for monetary exchange. The coins are the earliest coins of Colophon, and the circumstance that they are smaller than all but three of the pieces of unminted silver suggests that when the hoard was buried the Colophonians were employing what might be termed a bi-specie monetary system: small coins for very low level transactions, and bullion weighed on the balance for transactions involving more substantial sums.

This hoard of 906 minuscule silver coins and 77 small pieces of unminted silver came to the Ashmolean Museum, Oxford, from E. S. G. Robinson in 1953. For a number of years Betty Merrington, an assistant in the Heberden Coin Room, worked on the coins, devoting most of her efforts to identifying the prodigious number of dies. Her completed manuscript catalogue has remained on file in the Coin Room archives. The first published notice of the hoard appeared in 1975 in the inaugural volume of *Coin Hoards* as *CH* I.3, "Asia Minor, 1935/1940." Kim resumed study of the hoard in the early 1990s and made his analysis and revised catalogue of the coins by dies a prominent part of his Oxford Master's thesis (Kim 1994: 23–146, pls. 1–29). In two articles (Kim 2001: 15, figs 1.2–3, pl. 1; and 2002: 46–7), he summarized the evidence of the hoard for illuminating important aspects

\* henry.kim@ashmus.ox.ac.uk

\*\* john.kroll@classics.ox.ac.uk

of early coinage. In a paper devoted to weighed bullion as an antecedent of coinage, Kroll (2008: 22–3) has also drawn attention to the hoard's unusual significance.

One factor that has discouraged full publication of the find until now has been the intimidating number of coins in the hoard and the need to illustrate all of them, if the great number of dies from which they were struck is to be satisfactorily documented. We are grateful therefore to the editors of this journal for the opportunity to illustrate all of the coins at actual size. In order to facilitate study of the coins in enlargeable images, we have also reproduced the photographic record of the hoard on the American Numismatic Society's digital publications website (<http://www.numismatics.org/dpubs/>), while limiting the number of coins in the plates that accompany this article to a representative sampling. A tabular summary of the hoard's contents is given below in Table 1.

That the hoard has been preserved in anything like its present state is remarkable enough in itself. In the numismatic trade, it has long been customary to discard all pieces of silver bullion that might be found with coins, while a huge find of coins that, like these, could be considered virtual duplicates of each other would normally have been broken up and dispersed in small lots, if not in large part melted down. Perhaps it was the very small size of the coins that saved the hoard from this fate. Whether melted or sold individually to collectors, such coins would hardly have produced much profit. However this may be, it is worth reflecting that the very factors that might have made this assemblage uninteresting from a conventionally commercial point of view—the accompanying pieces of silver, the redundant replication of the same type of coin, and the minuscule size of the hundreds of coins themselves—are precisely what make the hoard unique and so valuable for the reconstruction of early Greek monetary history.

**Table 1. Synopsis of the Hoard**

<b>983 AR pieces</b>	<b>= 583 g</b>
906 coins (standard of Lydio-Persic silver stater: 10.7 g)	= 265 g* (45%)
1 Twelfth, 0.92 g	
353 Twenty-fourths, 0.43 g	
552 Forty-eighths, 0.21 g	
77 pieces of unminted silver	= 318 g (55%)
<hr/>	
<b>Number of coin dies (and estimated original number; see note)</b>	
<b>Twelfth:</b>	<i>Obv.</i> 1
	<i>Rev.</i> 1
<b>Twenty-fourths:</b>	<i>Obv.</i> 135 (representing a possible original 154–174)
	<i>Rev.</i> 153 (poss. orig. 165–191)
<b>Forty-eighths:</b>	<i>Obv.</i> 258 (poss. orig. 323–370)
	<i>Rev.</i> 260 (poss. orig. 345–398)
<b>Total</b>	<i>Obv.</i> 393 (poss. orig. >477–544)
	<i>Rev.</i> 413 (poss. orig. >510–589)

\*Actual total weight, which is 3.4 g less than the total obtained by simply multiplying the number of coins by their typical 0.92, 0.43, and 0.21 g masses.

## THE COINS (PLS. 14–36)

The coins all have the same obverse design: a profile male head of archaic style with long hair typically delineated in a wig-like stacking of parallel bands. On one early die (see Pl. 35, no. 12) the hair at the neck falls in two pointed locks, and on another die (Pl. 35, no. 85e) the hair, rendered in dots, has a wooly appearance. Reverses are stamped with a squarish or rectangular incuse containing an irregular or roughly quadripartite pattern. There are three weight denominations. One hoard specimen (diam. 9 mm) weighs 0.92 g, 353 specimens (c. 7 mm) cluster around 0.43 g, and 552 (5–6 mm) around 0.21 g. The weights correspond to the twelfth, twenty-fourth, and forty-eighth of the 10.7 g stater standard, customarily referred to as the Persic standard. Initiated in the gold and silver staters of Croesus (c. 560–545 BC),<sup>1</sup> it was continued by the Persians in their minting of posthumous Croeseid silver half-staters, which near the end of the sixth century were replaced by the minting of royal Persian silver *sigloi* of the same 5.35 g or half-stater weight. A histogram of the hoard coins (Fig. 1) reveals a strong adherence to the weight standard, a surprising feature in coins of such low value, but one that is found also in the metrologies of early electrum coins (Wallace 1989) and that here may reflect a correlation between the coins and the weighing out of small pieces of unminted silver such as are found with the coins in the hoard.

Coins of this type had gone unattributed until Margaret Thompson, in her publication of six specimens in the Burton Y. Berry collection (1961, *ad nos.* 1039–44), tentatively made a case for Colophon. Identifying the head as “almost certainly that of Apollo,” she observed that the deity and the weights of the coins are the same as those of the earliest fractions (Period I) cataloged in J. G. Milne’s monograph on the coinage of Colophon (1941). Thompson added “that a specimen of this issue was found in the Colophon excavation area, in association with many early fractions of Colophon and some of Miletus and Teos.” Although she did not cite her source for this information, it almost certainly came from the notes that Sidney Noe had made in Athens of the coins found in the American excavations at Colophon in 1922.<sup>2</sup>

Thompson’s observations on iconographical, metrological, and denominational continuity bear reinforcement. With the questionable exceptions of a few possible Artemis-head obverses in the fifth century, the head of Apollo was employed as the sole obverse type of Colophonian silver coinage down through Hellenistic

1. For the metrology and chronology of the Croeseid staters, see Cahill and Kroll 2005: 609–13.

2. The notes are mentioned by Milne (1941: 1), who received a summary of them from Noe. In his account of the excavations, Holland (1944: 93–4) explains that the excavation coins were brought to Athens for study before being finally taken to Istanbul.



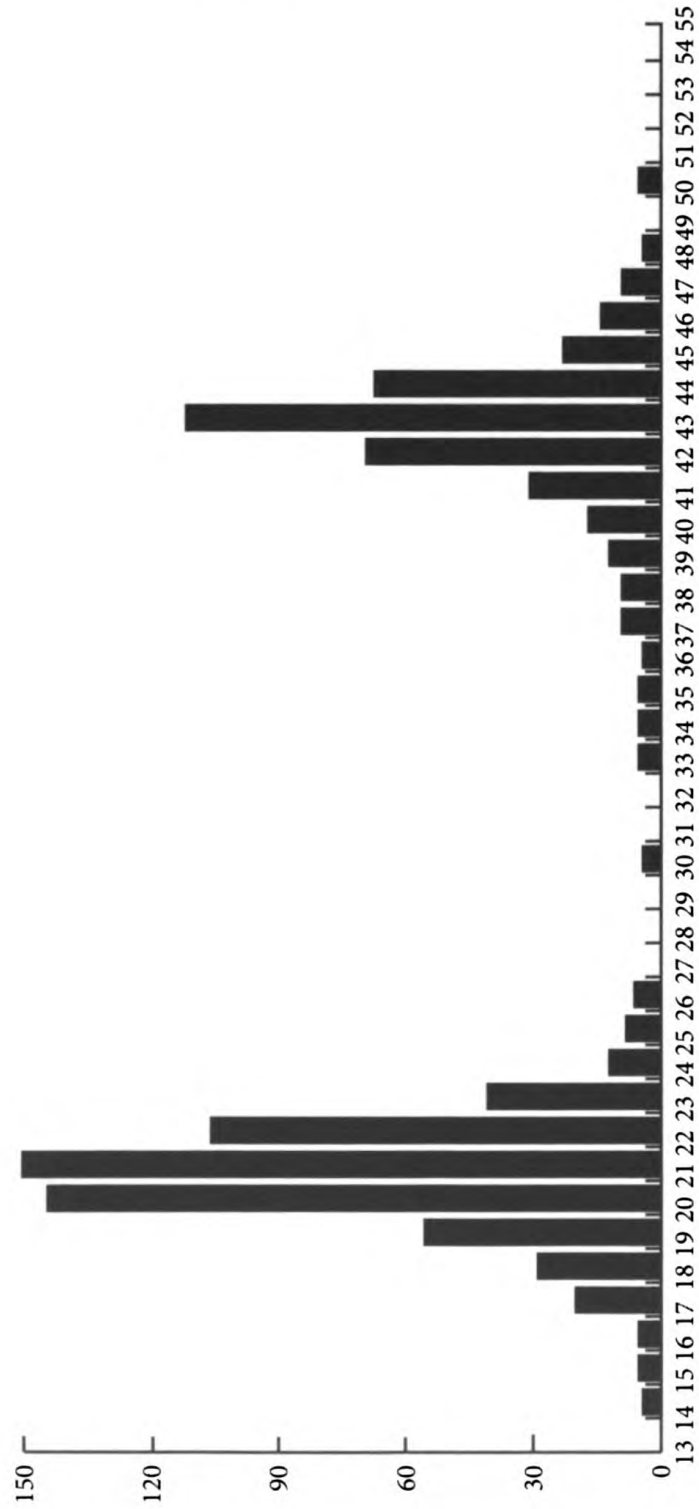


Figure 1. Weights (in 1/100s of a gram) of the Twenty-fourths and Forty-eighths

times—understandably in view of the fame of the great oracular temple of Apollo at Claros in the city's territory. More limiting from the standpoint of mint attribution is the Persic weight standard. Rare among civic coinages of western Asia Minor,<sup>3</sup> it remained the standard at Colophon until the end of the fifth century along with the continued production of the same small fractional denominations represented in our hoard. As for proveniences, in addition to the specimen found at Colophon, we have been informed that a number of the hoard-type fractions have turned up in metal detecting in the vicinity of ancient Notion, the port city of Colophon. Given the coherence of this evidence, we accept the attribution of these coins to Colophon as unproblematic. The coins have been listed under Colophon without comment in *Coin Hoards* I.23 ("Ionia, 1972," a group of silver fractions from Colophon [25, including some of our type, e.g., the illustrated no. 2] and other Ionian cities [27+]), and by Koray Konuk in his 2002 SNG of the Muharrem Kayhan collection in Turkey (pl. 14, nos. 342–54).

Archaic in style and struck to a standard inaugurated by Croesus, the hoard coinage is clearly a mintage of the second half of the sixth century. Its fabric argues against an early dating in this period; unlike the relatively globular coins, such as those of Croesus, from the middle of the century the hoard coins were struck from flattened flans.<sup>4</sup> Milne's c. 525–490 dating for the succeeding fractions of his Period I—Apollo head facing and reverse incuses containing denominational monograms—is almost certainly on the high side as are his dates for probably much of the following fifth century Period IIA–C silver. While some of the facing Apollo heads of Period I are archaic in appearance, the long wig-like locks of hair make some look positively Daidalic, those with short hair—the same head but without the Daidalic wig?—are quite refined. If this Period I coinage began closer to 500 than 525, the coins of the Ashmolean hoard would fall in the last third or quarter of the sixth century, where the most recent estimate (Konuk 2002: pl. 14: "Late sixth century") has placed them.

That Milne's Period I silver is unlikely to have begun much if at all before c. 500 is strengthened, we believe, by the chronological implications of its reverse mono-

3. In the Muharrem Kayhan Collection SNG (Konuk 2002), which gives a fairly extensive sampling of the earlier silver coinages of western Asia Minor, the Persic standard is identified at only two civic mints apart from Colophon: Ephesus (nos. 115–8, and possibly 113–4, 119, 126–37) and Mylasa (?) in Caria (nos. 929–30).

4. A dating close to mid-century might be suggested by IGCH 1156 ("Asia Minor, c. 1949"), if one could be confident that it was a genuine hoard and not a conflation of two separate finds. The lot associates four of our silver hoard coins with over fifty lion-head and lion-paw electrum pieces of Lydia. But the mixed character of the material and the absence of any Croeseid silver leaves the integrity of the assemblage open to question.

grams. The monograms—giving on fractions of twenty-fourth size the letters HM for *hemiobolon*, and on the forty-eighth size fractions TE for *tetartemorion*—attest to a shift in denominational nomenclature from the traditional East Greek weight terminology of descending fractions of the stater to the less cumbersome drachma-obol terminology of the coins of mainland Greece (cf. Kroll 2000: 83–4). The drachma-obol system is less cumbersome because the smallest units are divisions of the obol and not of the stater. The shift might have taken place with the introduction of the monograms at the start of the Class I coinage, in which case the monograms were added as an aid to accelerate familiarity with the new fractional terms. Or, if the Colophonians had started calling their twenty-fourths and forty-eighths half- and quarter-obols earlier, already during the time of the Ashmolean hoard coins, the monograms would have been added to the Period I fractions in order to make it easier to distinguish the two small denominations from each other. In any case, the borrowing of the drachma-obol system of Aeginetan and other coinages on the other side of the Aegean is unlikely to have occurred until this terminological system had become so familiar everywhere in the Greek world that people might prefer it to their own. It is possible that our hoard coins may have been called obols, hemiobols, and tetartemoria in their own time, as they surely were to become known later; but since we cannot be sure, we have chosen to retain the traditional fractional nomenclature of the Eastern Greeks here.

The most notable aspect of the hoard coinage is its scale. The die analysis of the hoard specimens reveals a level of production unparalleled among studied early Greek coinages. The 353 coins of twenty-fourth weight were struck from 135 obverse and 153 reverse dies, while the 552 forty-eighths were struck from almost twice as many dies: 258 for obverses and 260 for reverses.<sup>5</sup> If one were to assume very conservatively that each obverse die produced only 1000 to 5000 coins before minting of the coinage was finished or the die wore out,<sup>6</sup> the scale of minting would have been on the order of hundreds of thousands to millions of pieces.

When the total count of roughly 400 obverse dies was first mentioned in print (Kim 2002: 47), it was met in some quarters with incredulity. But it should be emphasized that the die figures are the patient work of two individuals, first, Betty Merrington, whose study was presumably assisted by consultation with Colin

5. These figures of course pertain only to the dies represented in the hoard. Using Esty's die estimator (Esty 1984, 1986), the 137 obverse and 153 reverse dies of the hoards' twenty-fourths suggest an original number of dies in the ranges of 154–179 and 165–191, respectively. Statistical estimates for the original number of dies for forty-eighths, are 323–370 for obverses and 345–398 for reverses.

6. For a good survey of the research aimed at estimating minting output from obverse dies, see Figueira 1998: 193.

Kraay, Keeper of Greek Coins during her years at the Ashmolean,<sup>7</sup> and, secondly, Kim, who, reviewing Merrington's work with the aid of photos enlarged at four times actual size, found her die identification to be about 95 percent accurate, a commendable achievement for such a difficult series as this. The obverse and, even more so, the reverse dies are in fact quite distinct. As stated, our purpose in publishing all specimens of the hoard electronically is so that others will have the opportunity to examine the evidence for themselves.

How to account for these exceptional die numbers? To begin with, it is probably misleading to compare them with the comparatively modest number of dies that are characteristic of most Greek civic coinages in silver that survive (or have been studied) mainly in large and medium denominational units of drachm weight (3–6 g) or higher.<sup>8</sup> The Ashmolean hoard coins at 0.21 and 0.43 g are, by comparison, minuscule: although there are about 900 of them, their total weight comes to only 268 g, the equivalent of a mere 23 Persic staters or 46 *sigloi*. Had the hoard fractions been minted with pieces of significantly larger denominational weight, they would presumably have been minted in less quantity, as there would have been less need for them. But the only unit of this coinage larger than the twenty-fourth is the rare, obol-sized twelfth of just under one gram (Pls. 14 and 35, no. 1), which is as poorly represented in published and unpublished collections as it is in the present hoard. Thus, the very size of the coinage's production would seem to be a function of the individual coins' extremely low values. There certainly appears to be an inverse relationship between the production scale of the two main fractions and their values. As noted, the number of obverse dies attested and estimated (n. 5) for the forty-eighths approaches twice the number attested and estimated for the twenty-fourths. Since we have to do with coins of very low value, it may be most meaningful to compare their die numbers with the numbers of dies of bronze coinages, the common low-value coinages of the fourth century and later. Few Greek bronze coinages have been studied by dies, but one that has, the bronze coinage of the Chalkidian League, comprised of three denominations and minted between c. 400 and 348 BC, involved an attested 422 obverse dies, which suggest an estimated original obverse die total in the vicinity of 700 (Callataÿ 2003: 134–7, 243, summarizing the results of Psoma 2001).<sup>9</sup>

7. Merrington was also responsible for the die-study, catalogue, tables, diagrams, and plates for *The Cistophori of Augustus* by C. H. V. Sutherland "in association with Nekriman Olcay and K. E. Merrington" (London 1970). In the preface, Sutherland pays tribute to "[h]er scrupulous attention to these matters and her keenness of eye..."

8. Callataÿ's 2003 survey of available die figures for archaic and classical coinages reveals that relatively few of these civic coinages in silver were minted from as many as a hundred, attested or estimated, obverse dies.

9. For the fourth-century bronze coinage of Maroneia, 296 obverse dies have been count-

These massive bronze coinages may owe some of their size to prolonged periods of striking. But this does not seem to be the case with the hoard coins here. Despite the several hundred dies employed, die-linkage, general stylistic uniformity, and minimal wear of the specimens attest to a relatively compact period of minting. The exceptionally fine condition of most of the hoard coins implies that they saw little circulation. Of those that are worn, most are of the head-facing-right type (only 43 obverse dies), suggesting that this type was earlier than the coins with the heads to the left.<sup>10</sup> Even so, what is remarkable among so many obverse dies is the overall consistency of the elements that make up the head. The hair on the back of the neck is nearly always rendered in a series of horizontal lines that blend into the slanted lines that form the hair on the head. A line or series of dots marks the break between the hair and the forehead, and the brow is delineated by a curving line that blends into the nose. An earring appears either in circular form or as a dot. The nose is usually long and thin and the eyes are created with the same combination of a line intersecting a dot to form the almond-shaped frontal eye. A fillet, one long end of which hangs down below the ear, appears more frequently on the twenty-fourths than on the forty-eighths probably owing to the greater working area on the larger die.

By emphasizing that elements of composition are all strikingly the same, we do not mean to suggest that distinct differences in style cannot be detected. Although most heads have characteristically exaggerated archaic features, some, such as die combination 290 of the forty-eighths (Pl. 36), are more naturally proportioned. But the variety of obverse styles—like the variety of patterns in the reverse incuse from amorphous to a regular cross-in-square—are to be explained by the use of multiple die-engravers and the difficulty of maintaining stylistic coherence in engraving metal dies no larger than 5–7 millimeters in diameter. It has proven impossible to order the reverse designs into a linear sequence, and the large number of coins struck from the same dies, the abundance of die links, and slight differentiation in condition, lend strength to the view that the hoard is comprised of coins that had been only recently issued and were collected together at one moment.

What this should imply is that all or nearly all of the dies were engraved at about the same time, and that all or nearly all of the coins were struck and put into circulation together soon thereafter. Since this was the first-ever coinage of Colo-

ed, leading to an estimated possible original total of over a thousand (Callataÿ 2003: 121–2, 242, referring to Schönert-Geiss 1987).

10. Another indication of the priority of the head r. format is the anomalous depiction of Apollo's hair in two locks on the above-mentioned 12 of the twenty-fourths (Pl. 35), a variant that is understandable if the die was designed before conventions for representing the god's image on the coinage had become fixed.

phon and since the fractions, because of their slight value, had to be manufactured *en masse*, scores of dies needed to be commissioned and put into use simultaneously to ensure that an adequate supply of these tiny struck pieces of silver, bags upon bags of them, would be ready in time for issue—presumably through exchange for individuals' unminted silver. In all likelihood, the coinage entered circulation in two contiguous phases, beginning with a sizeable initial issue (Apollo head r.), the supply of which was quickly depleted, requiring the commissioning of the truly vast issue (head l.) that followed.<sup>11</sup> The introduction of coinage in the city on a gradual, incremental basis that would have allowed for long-term, less intense striking was apparently not considered a practicable option.

Of special note is a technical feature that can be observed only in hoards that possess a strong duplication of coins. Two noteworthy series of the twenty-fourths demonstrate a clear break down of the reverse die: series 61–62 and 138–139.

### THE UNMINTED SILVER (PLS. 12–13 )

The 77 pieces of unminted silver make up a little more than half of the total 583 g weight of the hoard. About a third of these pieces are of the kinds that are routinely encountered in finds of silver bullion in Anatolia, the Levant, Mesopotamia, Egypt, and the Western Mediterranean:<sup>12</sup> amorphous lumps of silver (53, 54), irregularly chopped pieces of ingots (55–65), and scrap pieces of worked silver, mostly from jewelry (66–77). What sets these pieces apart from their counterparts in most other bullion deposits is their generally small size—a feature they share with the pieces in the Celtiberian hoard published by van Alfen, Almagro-Gorbea, and Ripollès (2008). Three pieces are exceptionally large: at 40.8 g, the curiously-shaped no. 53 is, for this hoard, truly massive; and the bean-shaped no. 54 (10.22 g) and the tightly folded strip of an embossed, formerly gilded silver sheet 66 (12.5 g), are exceptionally heavy as well. All of the other pieces weigh five grams or less, most falling in the 1–3 g range.

11. Unbroken continuity between the two phases is reinforced by a reverse die-link between a head l. and two head r. obverse dies (see die combinations 45–47 of the twenty-fourths).

12. For discussion, illustrations, and bibliography on silver bullion in hoards (with and without silver coins), see for the Levant, Giten and Golani 2001; C. Thompson 2003; for Mesopotamia, Le Rider 2001: 1–39; for Egypt, Kroll 2001b; van Alfen 2004–5a and b; for S. Italy (*IGCH* 1872 and 1874) and Sicily (*CH* 8.35), Kroll 2008: 29–33; for Spain, van Alfen, Almagro-Gorbea, and Ripollès 2008 (this volume); for Caria (*CH* 8.10), Kroll 2008: 24; and for two “Black Sea” hoards, Kraay and Moorey 1981 (*CH* 1.15) and Pfisterer, M. 2000. De Callatay (2003b) has argued that the two last finds ought not to have come from the Black Sea region, but his suspicions are, we believe, unfounded.

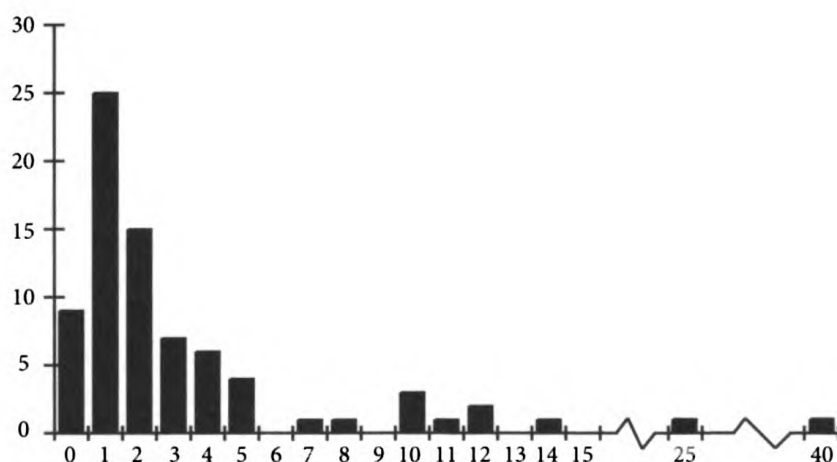


Figure 2. Weights (in grams) of the pieces of Unminted Silver

The remaining two-thirds of the unminted pieces in the hoard (1–52) are in the form of flat, hammered disks, some circular, most elliptical in shape. In general, these rounded pieces were hammered from poured globules or “dumps” of silver. The partially flattened 3, however, was made from a piece of silver—clearly not a coin—that bore a design in relief on both sides. We have found no indication that any of the discs might have been made by flattening a coin. With the disks we have included one rectangular piece (no. 13), since after being cut into this shape it too had been hammered.

The disks span a gamut of sizes, from 25.4 g in mass and 31 mm in diameter, down to 0.24 g and 5 mm. As with the other types of silver pieces, however, the great concentration is toward the lower end of the weight range, with 70 per cent weighing less than 4.0 g.

A few typeless silver disks like these have turned up in admixtures of bullion and coins recovered in Egypt and the Greek West (Kroll 2001b: 7) and in the Black Sea region (Pfisterer 2000: 68, pl. 14, nos. 783–790), although on average they are heavier and larger than most of the disks in the Ashmolean hoard.

In publishing the eight disks and cut-disk fragments in the large hoard from the region of the Black Sea (fifth century BC), Matthias Pfisterer (2000: 68) observed that they, which have the shape and sizes of coins, circulated not as raw silver but specifically for use as money, since several show signs of wear from circulation and three had been carefully cut at the edges with a chisel to test that they were silver to the core. Since such coin-like disks are not found in bullion assemblages earlier than the latter part of the sixth century, it seems that they were in fact loosely imitative of coins. This is not to say that they could have been trans-

acted at sight and on trust the way coins were. As Georges Le Rider (2002: 6) has explained, in a bullion-using monetary economy, the only way of ascertaining or verifying the value of any unmarked silver was by weighing it in the pan of a balance. Even those disks that might have had masses that agreed with one weight standard or another would have to be weighed at the time of expenditure—how else could one be sure of their true weight? Apparently, purveyors of silver bullion that was to be used expressly in monetary exchange had pieces manufactured in the form of these coin-sized disks because of its convenience and the association of the shape with money.

Since these small currency ingots were intended to be weighed out on the balance, no purpose would have been served in making them conform to divisions or multiple units of a fixed weight standard. Accordingly, the masses of the Ashmolean disks are found to be quite random, without any general agreement with denominational weight units of the local, Persic standard—at least not at time of manufacture. At 10.84 g, one disk (5) does have the mass of a Persic stater, but its original, manufactured weight was clearly greater; it was only at some time after the piece had been shaped by hammering that some metal was chopped off at one end to make it a one-stater piece. The only sure conformity between the manufactured masses of some disks and Persic-weight values is found in the three smallest disks (50–52), which at 0.41–0.42 g and 0.24 g correspond to the masses of the twenty-fourth and forty-eighth hoard coins. Even so, it is questionable whether this correspondence at the bottom of the weight spectrum was actually intentional—i.e., that the weights of these three smallest disks alone had been finely adjusted before hammering so that the disks, like coins, could be transacted without weighing at the time of the transaction. In any case the masses of the rest of the disks are haphazard and spread rather evenly, without any significant clustering at one or more points, on a finely calibrated weight scale, i.e., one that measures differences at least as small as a third or a quarter of a gram.<sup>13</sup> The fact that the disks were sometimes cut in half or into other smaller fragments (5, 26, 28, 42; Pfisterer 2000: nos. 786, 789, 790) shows also that they were treated no differently than other forms of silver bullion.

### SIGNIFICANCE OF THE HOARD

In keeping with the established principle that fractional silver coins circulated locally and are hardly ever encountered at a distance from their city of origin (Kim

13. The clustering shown in the histogram of Fig. 2, which tabulates the masses of the disks and the other unminted hoard silver, is not relevant to this question since it lists the silver pieces in large, one-gram increments. Compare the histogram of the hoard coins (Fig. 1), which tallies specimens by hundredths of a gram.



2002: 48), there is good reason to assume that the Ashmolean hoard was recovered in the territory of Colophon. It is thus one of the very few silver hoards from a Greek center that happens to contain pieces of silver bullion mixed in with coins.<sup>14</sup> Moreover, since most of this bullion is in the form of hammered disks that were made specifically for use in monetary exchange, there can be little doubt that the entire assemblage of unminted silver in the hoard was functionally regarded as transactional, monetary silver. The hoard thus gives a glimpse of a local Greek monetary system in transition, at a stage when two forms of currency were being employed concurrently, the old currency of anonymous silver bullion and the new type of currency in the form of state-minted and state-guaranteed coins.

Although a few of the bullion pieces are relatively heavy, the unminted silver as a whole is characterized by the generally diminutive sizes of the pieces—two-thirds of which weigh between 5.0 and 0.24 g. Significantly, the great mass of twenty-fourth and forty-eighth coins consists of pieces that are consistently much smaller still. Weighing either 0.43 or 0.21 g, the coins are lighter than all but four of the unminted pieces. The position of these tiny coins at the bottom of the hoard's weight scale has prompted the suggestion that they were struck principally to accompany or supplement the bullion (Kroll 2008: 23). Since unminted silver was easily weighed in the balance except for extremely small bits, the availability of such coins would have made weighing in minute increments unnecessary.<sup>15</sup>

To be sure, the Colophonian coinage in question includes a third, higher denomination, the twelfth (or obol), weighing just under one gram. Specimens, however, are rare. We know of only two (both with Apollo heads facing left), the one in our hoard and the one from the Berry collection at the ANS (Thompson 1961, no. 1039, from a second pair of dies). While this slight record of surviving examples could be misleading, it appears at present that, unlike the twenty-fourths and forty-eighths, the twelfths were minted in relatively small numbers. Of the three denominations of our hoard coinage, moreover, the twelfth is the only one that was not continued in Colophon's later coinage. The fifth century coinages of Milne's

14. The one mixed archaic hoard with a definite urban provenance is Taranto 1911 (*IGCH* 1874), which, however, containing no Tarantine coins, was a (money-changer's?) hoard entirely of foreign bullion and coins (Kroll 2008: 30–33). Selinus 1985 (*CH* 8.25), with bullion and coins, was apparently recovered about 100 km east of Selinus (Kroll 2008: 30).

15. Experimenting with carefully devised replications of ancient Greek double-pan balances, Grayson (1975: 707–25) determined that they could distinguish differences down to two-tenths of a gram. In one experiment, a balance recorded a difference of one-tenth of a gram, but he discounted the result as unreliable. It may not have been. Judging from the weights of coins, Kagan (2006: 54) writes that “Greek mints may not have been accurate to a hundredth of a gram, but certainly to a tenth.” Of course there was more to weighing by a busy shopkeeper than simply the exactitude of his scale; weighing in a market stall needed also to be done with all possible speed.

Periods I and II consist of drachms (with the weight of the Persian siglos), hemi-obols, and quarter-obols (successors to our twenty-fourths and forty-eighths), to which was added in Period II an occasional third-obol piece (Milne 1941: 39–40). The continuing production of these small fractions of the obol throughout the fifth century is one of the more noteworthy features of Colophonian coinage. But the conspicuous absence of the obol unit itself amid this production of its fractions makes their continuation even more interesting, especially since an obol or twelfth had been introduced in the pre-Period I coinage of the Ashmolean hoard. Since the coined obol disappeared from the currency apparently because it lacked importance, one is led to suspect, given its minimal representation in the hoard, that its usefulness in the currency system may have been marginal from the outset. Judged by both their scale of production and their continued prominence in the later coinage of Colophon, the small twenty-fourths and forty-eighths were overwhelmingly the more significant denominations. It is they that define the hoard coinage. The hoard's lone twelfth, on the other hand, would seem to represent a trial in coining the next step up the denominational ladder in an experiment that proved to be unsuccessful.

This is intelligible if the purpose of the coinage was not to replace the bullion currency—hardly a plausible possibility anyway in view of the coins' limited field of low weights—but rather to supplement it by facilitating transactions in silver that weighing on the balance was singularly ill-suited to measure, namely, transactions at the bottom of the value scale. Put abstractly, the limited weight range of the coinage implies a limited function. Introduced for the exchange of silver in quarter of a gram increments, the coinage would have had little need for a denomination as heavy as the *circa* one-gram obol/twelfth that could not contribute to such finely measured precision and whose value was easily made up by its half and quarter fractions. Since payments in this coinage would have been made by counting out these quarters and halves, we should probably think of the quarter-obol or forty-eighth not as the lowest fraction of a higher standard weight unit, as it is named in the traditional top-down divisional sequence, but rather as the basic building block or foundational unit of the coinage as it was used practically, in a bottom-up ladder involving two multiples, its double, the twenty-fourth/hemiobol, and the short-lived quadruple twelfth/obol.

Transactions involving moderate to large sums of money would necessarily have been conducted in another specie or species. Often this would have been the Persian siglos (as Milne [1941: 35] assumed in his discussion of the half- and quarter-obols of his Period I). But the hoard implies that silver bullion was another alternative specie, very likely the most common one, not least because its use probably went back for generations and because its procurement—silver in any form, from any source—was so simple.

The phenomenon thus documented in this hoard, of a monetary system that employed two distinct types of currencies, one for low-level, the other for higher-level expenditures, is so common in world monetary history that it is rarely calls for comment. Most familiar of course are all national currencies of the present day with their metal coins and paper bills. Familiar too are the separate but integrated bronze and silver coinages minted by Greek states in the fourth century and Hellenistic period. Like our twenty-fourths and forty-eighths, these bronze coinages represented fractional values of the obol, while also being based on a fundamental value-unit of their own, the *chalkous*. They too were limited-purpose or single-purpose coinages, issued for local exchange in petty retail activity and securing the modest needs of everyday living. In Hellenistic times, purchasing with silver began at the level of a triobol or hemidrachm, the lowest denomination then being minted in silver.

Accordingly, we believe that the minute Colophonian silver fractions of the Ashmolean hoard and Milne's fifth-century Periods I and II should be recognized as forerunners of the conventional bronze coinages of the later Greek world. As with bronze coins later, the twenty-fourths and forty-eighths were the pieces that the people of Colophon carried in their purses, or their cheeks (now see Cahill and Kroll 2005: 591), when going off to the market for provisions. Twenty-fourths and forty-eighths occur also in the late sixth- and fifth-century silver coinages of some other Ionian and Carian cities, such as Ephesus, Miletus, Teos, and Mylasa,<sup>16</sup> indicating that the coining of these lowest exchange values in silver was a regional practice, one that can be traced back to the minute denominations of early electrum coinage (Kraay 1962/3: 13).<sup>17</sup>

There are several further considerations that arise from the hoard and merit more discussion than we are able to devote to them here. We conclude by identifying them and emphasizing certain aspects of the hoard that have wider implications for reconstructing the complex early monetary history of Greece.

First and most important, the hoard not only documents what the Colophonians did for money before they had coinage, but it reveals that they continued to employ a traditional currency of unminted silver even after they had begun to coin. Obviously, this complicates the conventional view that Greek cities were

16. See, as a synopsis, Konuk 2002, under the names of these cities.

17. As shown by the twenty-fourths, forty-eighths, and ninety-sixths that make up over half of the electrum coins recovered from the Artemisium Central Basis deposit at Ephesus and occur in the typeless electrum "proto-coins" found elsewhere in the 1905/6 Artemisium excavations (Robinson 1951: 166-67). Such minute divisions were an essential element of coinage from its very beginning. The pieces of unworked silver in the Artemisium contexts were also small. There were seven of them, all in the form of little dumps or drops, although only three were recorded with weights: 0.45, 1.10, and 1.16 g (*ibid.*: 157, 164, 166; and Kroll 2008: 22).

quick to adopt coinage, whereas conservative resistance to coinage and adherence to the age-old practice of weighing out silver on the balance were typical behaviors of Near Eastern, Egyptian, and other non-Greek peoples. Now we have evidence for such adherence in at least one Greek community. The Colophonians apparently found no reason to be dissatisfied with the practice of weighing out silver, except for payments that were too small to be conveniently or accurately measured by this procedure.

Second, while one of the great incentives for adopting a coined currency was to eliminate the step of weighing out metal in each and every cash transaction, the hoard emphasizes that this elimination was most critical for payments at and near the bottom of the value spectrum. Such payments involving weights of silver as small as a quarter of a gram must have been hugely important in Colophon, else the city would not have gone to the very considerable trouble of minting a massive number of tiny coins just to facilitate transactions at this level. Since it is hardly likely that this was unusual, one suspects that a number of other communities were encouraged to adopt coinage primarily because of its specific advantage in dealing not with large amounts of silver money but with silver in small increments.

Third, the slight value of the hoard coins and their massive minting have some revealing social and political implications. The huge number of dies that were cut for this initial coinage of the city underscores what a tremendous undertaking it must have been to put into place a coinage whose function, notably, was restricted to the modest, quotidian exchange needs of the agora and the general population at large. Not only was the decision to coin at Colophon a major civic commitment, but it was one that was designed to benefit the broadest possible range of the populace and the local retail traders on whom the populace depended. It marked an enlargement of the city government's responsibilities into the provision of money and concern for the vitality of internal trade. None of this would be surprising if we came upon it a century later when written sources, Aristophanes and other writers of Attic comedy especially, picture the Athenian agora as a thriving market place teeming with small-time buyers and vendors exchanging silver coins in small denominations. But our limited sources for the Archaic period are concerned mainly with the economic activities of the elite and have hardly anything to say about the common man, his money, and the agora. In this void the twenty-fourths and forty-eighths of the hoard provide invaluable documentation that the economic interests of the entire community were a matter of serious public importance in late Archaic Colophon, and we can sense that the agora there was probably as lively and crowded with ordinary people buying and selling with petty cash as the agora of Aristophanes' Athens.

Finally, in this paper we have briefly compared the hoard coinage to the bronze coinages of Greek states in the fourth century and Hellenistic times with respect to

their analogous monetary roles, values, and scale. Historians have generally taken the banal role of this bronze currency for granted because such low-value coins are late and seemingly appropriate to a developed and fully monetized economy. If the mass use of small-value coins is to be regarded as an index of monetization, however, we see that a remarkably high degree of monetization had been achieved at Colophon and other Greek cities, particularly but not exclusively in Asia Minor, already by the later sixth century, as Kim (2002) and Kagan (2006) have observed with regard to other early coinages that included fractions of the obol. It is not hard to understand why, once we recognize that silver coinage was preceded by a long period in which the buying and selling of goods and services was transacted in other forms of metal money. In Western Asia Minor this included gold and electrum bullion (Kroll 2008: 18–21) and subsequently electrum coins in addition to silver bullion, which was commonly weighed out in small pieces, as shown by the disks and other unminted silver in the present hoard.<sup>18</sup>

#### REFERENCES

- Balmuth, M. (ed.) 2001. *Hacksilber to coinage: new insights into the monetary history of the Near East and Greece*. Numismatic Studies 24. New York: American Numismatic Society.
- Cahill, N., and Kroll, J. H. 2005. New archaic coin finds at Sardis. *American Journal of Archaeology* 109: 589–617.
- de Callataÿ, F. 2003a. *Recueil quantitatif des émissions monétaires archaïques et classiques*. Wetteren, Belgium: Cultura.
- . 2003b. Review of Pfisterer, 2000. *Revue Belge de Numismatique* 149: 267–72.
- Esty, W. W. 1984. Estimating the size of a coinage. *Numismatic Chronicle* 144: 180–3.
- . 1986. Estimation of the size of a coinage: a survey and comparison of methods. *Numismatic Chronicle* 146: 185–215.
- Figueira, T. 1998. *The power of money, coinage and politics in the Athenian Empire*. Philadelphia: University of Pennsylvania Press.
- Gitin, S., and Golani, A. 2001. The Tel Miqne-Ekron silver hoards: The Assyrian and Phoenician connections. In Balmuth 2001, 27–48.
- Grayson, C.H. 1975. *Weighing in ancient Greece*. Unpublished D. Phil. Thesis. University of Oxford.
- Holland, L. B. 1944. Colophon. *Hesperia* 13: 91–171.

18. The authors gratefully acknowledge the assistance of Christopher Howgego, Volker Heuchert, Lisa Kallet, Koray Konuk, Müşerref Yetim, and Peter van Alfen for their invaluable contributions of time, interest, and suggestions.

- Kagan, J. H. 2006. Small change and the beginning of coinage at Abdera. In *Agoranomia. Studies in money and exchange presented to John H. Kroll*, P. G. van Alfen, ed., pp. 49–57. New York: American Numismatic Society.
- Kim H. S. 1994. *Greek fractional silver coinage: a reassessment of the inception, development, prevalence, and functions of small change during the late Archaic and early Classical period*. Unpublished M. Phil. Thesis, University of Oxford.
- . 2001. Archaic coinage as evidence for the use of money. In *Money and its uses in the Ancient Greek world*, A. Meadows and K. Shipton, eds., pp. 7–21. Oxford and New York: Oxford University Press.
- . 2002. Small change and the moneyed economy. In *Money, labour and land, approaches to the economies of ancient Greece*, P. Cartledge, E. E. Cohen, and L. Foxhall, eds., pp. 44–51. London and New York: Routledge.
- Konuk, K. 2002. *Sylloge Nummorum Graecorum, Turkey I: The Muharrem Kayhan Collection*. Istanbul and Bordeaux: Ausonius Publications.
- Kraay, C. M., and Moorey, P.P.S. 1981. A Black Sea hoard of the fifth century BC. *Numismatic Chronicle* 141: 1–19.
- Kroll, J. H. 2001a. Observations on monetary instruments in pre-coinage Greece. In Balmuth 2001, pp. 77–91.
- . 2001b. A small find of silver bullion from Egypt. *American Journal of Numismatics* 13: 1–20.
- . 2008. The monetary use of weighed bullion in Archaic Greece. In *The monetary systems of the Greeks and Romans*, W. V. Harris, ed., pp. 13–37. Oxford and New York: Oxford University Press.
- Kraay, C. M. 1962/3. Monnaies provenant du site de Colophon. *Revue suisse de Numismatique* 42: 5–13.
- Le Rider, G. 2001. *La naissance de la monnaie. Pratiques monétaires de l'orient ancien*. Paris: Presses Universitaires de France.
- Milne, J. G. 1941. *Kolophon and its coinage*. Numismatic Notes and Monographs 96. New York: American Numismatic Society.
- Pfisterer, M. 2000. *Ein Silberschatz vom Schwarzen Meer. Beobachtungen zum Geldumlauf im Achaimenidenreich*. Studia Iranica, Cahier 22. Paris: Association pour l'avancement des études iraniennes.
- Psoma, S. 2001. *Olynthe et les Chalcidiens de Thrace. Étude de numismatique et d'histoire*. Stuttgart: Steiner.
- Robinson, E. S. G. 1951. The coins from the Ephesian Artemision reconsidered. *Journal of Hellenic Studies* 71: 156–67.
- Schönert-Geiss, E. 1987. *Griechisches Münzwerk : Die Münzprägung von Maroneia*. Berlin: Akademie-Verlag.
- Thompson, C. M. 2003. Sealed silver in Iron Age Cisjordan and the “invention” of coinage. *Oxford Journal of Archaeology* 22: 67–107.

- Thompson, M. 1961. *Sylloge Numorum Graecorum, American Numismatic Society: Burton Y. Berry Collection*. New York: American Numismatic Society.
- van Alfen, P. G. 2004-05a. Herodotos' "Aryandic" silver and bullion use in Persian-Period Egypt. *American Journal of Numismatics* 14: 7-29.
- . 2004-05b. A new Athenian "owl" and bullion hoard from the Near East. *American Journal of Numismatics* 14: 47-61.
- , M. Almagro-Gorbea, and P. P. Ripollès. 2008. A new Celtiberian hacksilver hoard, c. 200 BCE. *American Journal of Numismatics* 20: 265-293.
- Wallace, R. W. 1989. On the production and exchange of early Anatolian electrum coinage. *Revue des études anciennes* 91: 87-94.

## CATALOGUE

### Unminted silver (Pls. 12-13)

Weights are given in grams. Dimensions (length/width/thickness) in millimeters.

### Hammered disks (and other shapes)

Flat on both sides. One face normally shows two to five slight facets from hammering, while the other face, compressed against the surface of an anvil, is perfectly smooth.

1. 25.39 31/21/6 Thick.
2. 14.83 23/17/5
3. 12.02 25/16/4.5

Because of the tapering thickness, hammering failed to flatten the metal at its thinner end, which retains traces of relief on both sides from prior working. The lines and grooves in the relief are jumbled and do not suggest any design or lettering, such as would indicate that the metal had previously been a coin.

4. 11.61 22/22/5
5. 10.84 26/15/4

About a quarter of the original metal was chopped off at one end with three chisel cuts.

6. 10.24 20/16/5
7. 8.62 20/14/5
8. 7.20 21/16/3 Multiple small facets on upper face; cf. 22, 35.
9. 5.90 15/12/3.5

The smoother, anvil side is lightly scratched with nine, apparently random lines.

10. 5.72 15/14/3.5

The wide, deeply punched hole on one side was presumably punched for testing, probably before the piece was hammered.

11. 5.12 15/13/3

12. 4.53 16/12/3

A piece had been chopped off the small end before hammering.

13. 4.16 12/8/3

Cut into rectangle and then hammered (facets on one face).

14. 4.04 14/13/3

15. 4.01 13/13/3

16. 3.82 12/11/4 Thick.

17. 3.72 16/13/2

18. 3.72 16/11/2.5

19. 3.55 18/11/2.5 One side cut before hammering.

20. 3.29 13/11/2.5

21. 3.14 16/12/2

22. 2.93 18/12/2 Multiple facets on one side.

23. 2.89 13/11/2

24. 2.61 12/11/2

25. 2.52 16/8/2

26. 2.49 13/12/3-1

Half of disk that was snapped in two after the thickness was reduced with small facets towards the middle.

27. 2.46 11/11/2.5

28. 2.24 8/12/2-1.5

Half of disk that was snapped in two after the thickness was reduced, like 26.

29. 2.11 12/9/2

30. 1.97 11/7/2

31. 1.94 11/11/2

32. 1.91 14/10/1.5-1 Thickness tapers towards both ends.

33. 1.86 11/9/2

34. 1.77 10/7/3

35. 1.72 15/9/1-0.5

Thickness tapers towards both ends. Multiple small facets on both sides, cf. 8.

36. 1.70 10/9/2

37. 1.67 10/9/2

38. 1.66 8/8/4 Thick.

39. 1.61 12/10/1.5

40. 1.44 11/9/1.5 Rough, unworn edges.

41. 1.37 11/10/1.5 Rough, unworn edges.

42. 1.36 10/9/2 Half of a sharply cut disk.

43. 1.32 10/11/1.5 Metal probably with 1 or 2 cut edges before flattening.

44. 1.10 10/9/1.5

45. 1.09 6/6/3.5 A partially flatten cube. Thick.

46. 0.92 9/8/1



47.	0.76	11/10/1
48.	0.69	7/7/1
49.	0.58	7/7/1
50.	0.43	7/6/1
51.	0.41	7/5/1 Rough edges before flattening
52.	0.24	5/5/1

### Amorphous lumps

53. 40.84 31/18/15  
Lumpy, curved piece of silver, cast roughly in the shape of the letter pi. If straightened out into a more or less flat bar, the bar would measure 60 x 18 mm, with a thickness of about 10 mm.
54. 10.22 22/13/6 Bean-shaped lump, rough and rounded on all sides.

### Fragments chopped from disks or other ingot types

55. 5.13 17/14/5-1 4 edges, of which 2 are cut. Thickness tapers.
56. 4.92 18/10/6 4 edges, of which 3 are cut.
57. 4.78 16/10/5 4 edges, all cut.
58. 2.89 11/10/3 4 edges, all cut.
59. 1.62 9/7/4 5 edges, of which 3 are cut.
60. 1.58 9/8/5 6 edges, of which 4 are cut.
61. 1.51 7/7/4 6 edges, of which 5 are cut.
62. 1.01 7/7/4.5 6 edges, of which 4 are cut.
63. 1.05 7/6/4 4 edges, all cut.
64. 1.03 9/7/3 6 sides, all cut.
65. 0.47 8/7/1.5 4 sides, of which 3 are cut.

### Scrap pieces of worked silver

66. 12.85 25/23/8  
Thin, silver sheeting (c. 1 mm thick) tightly folded over 3 or 4 times. The yellowish hue of the surface and a small (c. 2 x 3 mm), adhering flake of gold foil show that the silver had formerly been gilded. It had also been embossed with an indeterminate design, which included a large area stippled with closely-placed dash-like punches.
67. 3.65 9/8/2 Cut end of tongue-shaped strip, bent in curve.
68. 2.79 11/th. 5-7 Fragment of a rod, cut at each end.
69. 2.65 15/8/2.5 Cut at left and right from 8 mm wide strip.
70. 2.58 16/8/2 Cut at left and right from 8 mm wide strip.
71. 2.59 13/10/2 Spirally wound wire (2 mm thick) with finished ends, from an ear ring.
72. 2.48 13/12/ 3.5-2 Curved piece of wire (3.5-2 mm thick), cut at both ends.

73. 2.04 13/11/2 Spirally wound wire (2 mm thick) with finished ends, as 71.  
 74. 1.84 8/6/7 Fragment, probably from a fibula, where a round and a cubed section were joined. Cut at each end.  
 75. 1.84 10/11/1 Tongue-shaped strip (1 mm thick), round at both ends, bent double and pinched together.  
 76. 1.42 8/8/1 Tongue-shaped strip (1 mm thick), round at both ends, bent in curve.  
 77. 0.76 10/7/1  
 Length of jewelry band (1 mm thick), ornamented with wire borders and band of raised rectangles in between. Cut at both ends and rolled into a loop.

## Coins (Pls. 14-36)

\* = illustrated at actual size on Pls. 14-34 and in an enlargement on Pls. 35-36.

## Twelfth

- |                |  |    |  |
|----------------|--|----|--|
| 1              | O 1 Head left<br>R 1 Incuse punch<br>*a. 0.92                      | 6  | O 4 Head right<br>R 5 Same die<br>*a. 0.40                     |
| Twenty-fourths |  | 7  | O 4 Same die<br>R 6 Incuse punch<br>a. 0.45                    |
| 1              | O 1 Head right<br>R 1 Incuse punch<br>*a. 0.41                     | 8  | O 4 Same die<br>R 7 Incuse punch<br>*a. 0.41                   |
| 2              | O 2 Head right<br>R 2 Incuse punch<br>*a. 0.42                     | 9  | O 4 Same die<br>R 8 Incuse punch<br>a. 0.43                    |
| 3              | O 3 Head right<br>R 3 Incuse punch<br>a. 0.44                      | 10 | O 4 Same die<br>R 9 Incuse punch<br>a. 0.42                    |
| 4              | O 3 Same die<br>R 4 Incuse punch<br>a. 0.43                        | 11 | O 4 Same die<br>R 10 Incuse punch<br>a. 0.46                   |
| 5              | O 3 Same die<br>R 5 Incuse punch<br>*a. 0.42<br>b. 0.44<br>c. 0.43 | 12 | O 5 Head right; hair in two locks<br>R 10 Same die<br>*a. 0.43 |

- |   |  |
|---|--|
| <p>13 O 6 Head right<br/>R 11 Incuse punch<br/>a. 0.42</p> <p>14 O 7 Head right<br/>R 11 Same die<br/>a. 0.41</p> <p>15 O 8 Head right<br/>R 12 Incuse punch<br/>a. 0.45</p> <p>16 O 9 Head right<br/>R 13 Incuse punch<br/>*a. 0.46</p> <p>17 O 10 Head right<br/>R 14 Incuse punch<br/>a. 0.42</p> <p>18 O 11 Head right<br/>R 14 Same die<br/>a. 0.46<br/>*b. 0.46</p> <p>19 O 11 Same die<br/>R 15 Incuse punch<br/>a. 0.46</p> <p>20 O 12 Head right<br/>R 16 Incuse punch<br/>*a. 0.41</p> <p>21 O 13 Head right<br/>R 17 Incuse punch<br/>*a. 0.43</p> <p>22 O 14 Head right<br/>R 17 Same die<br/>a. 0.43</p> <p>23 O 14 Same die<br/>R 18 Incuse punch<br/>a. 0.40</p> <p>24 O 14 Same die<br/>R 19 Incuse punch<br/>a. 0.42</p> | <p>25 O 15 Head right<br/>R 20 Incuse punch<br/>a. 0.38</p> <p>26 O 15 Same die<br/>R 21 Incuse punch<br/>a. 0.36</p> <p>27 O 16 Head right<br/>R 22 Incuse punch<br/>a. 0.41<br/>b. 0.40</p> <p>28 O 16 Same die<br/>R 23 Incuse punch<br/>a. 0.44<br/>b. 0.43</p> <p>29 O 16 Same die<br/>R 24 Incuse punch<br/>a. 0.45</p> <p>30 O 17 Head right<br/>R 24 Same die<br/>a. 0.44</p> <p>31 O 18 Head right<br/>R 25 Incuse punch<br/>*a. 0.42</p> <p>32 O 18 Same die<br/>R 26 Incuse punch<br/>a. 0.39</p> <p>33 O 19 Head right<br/>R 27 Incuse punch<br/>*a. 0.42</p> <p>34 O 20 Head right<br/>R 28 Incuse punch<br/>a. 0.41</p> <p>35 O 21 Head right<br/>R 29 Incuse punch<br/>*a. 0.44</p> |
|---|--|

- |   |   |
|---|---|
| <p>36 O 22 Head right<br/>R 30 Incuse punch<br/>a. 0.44</p> <p>37 O 22 Same die<br/>R 31 Incuse punch<br/>a. 0.42</p> <p>38 O 23 Head right<br/>R 32 Incuse punch<br/>a. 0.42</p> <p>39 O 23 Same die<br/>R 33 Incuse punch<br/>a. 0.44</p> <p>40 O 24 Head right<br/>R 34 Incuse punch<br/>a. 0.47</p> <p>41 O 24 Same die<br/>R 35 Incuse punch<br/>a. 0.44</p> <p>42 O 24 Same die<br/>R 36 Incuse punch<br/>a. 0.41</p> <p>43 O 25 Head right<br/>R 37 Incuse punch<br/>a. 0.42</p> <p>44 O 26 Head right<br/>R 38 Incuse punch<br/>a. 0.44</p> <p>45 O 26 Same die<br/>R 39 Incuse punch<br/>a. 0.39</p> <p>46 O 27 Head right<br/>R 39 Same die<br/>a. 0.38<br/>b. 0.38<br/>c. 0.40</p> | <p>47 O 28 Head left<br/>R 39 Same die<br/>a. 0.47</p> <p>48 O 29 Head left<br/>R 40 Incuse punch<br/>a. 0.41<br/>b. 0.43</p> <p>49 O 29 Same die<br/>R 41 Incuse punch<br/>a. 0.44</p> <p>50 O 29 Same die<br/>R 42 Incuse punch<br/>a. 0.44</p> <p>51 O 30 Head left<br/>R 42 Same die<br/>a. 0.43</p> <p>52 O 31 Head left<br/>R 42 Same die<br/>a. 0.43</p> <p>53 O 31 Same die<br/>R 43 Incuse punch<br/>a. 0.44</p> <p>54 O 32 Head left<br/>R 43 Same die<br/>a. 0.44<br/>b. 0.43<br/>c. 0.42<br/>d. 0.42<br/>e. 0.42<br/>f. 0.43<br/>g. 0.44</p> <p>55 O 33 Head left<br/>R 43 Same die<br/>a. 0.41<br/>b. 0.42</p> |
|---|---|

- 56 O 34 Head left j. o.45  
R 43 Same die k. o.43  
a. o.43 l. o.44  
m. o.44
- 57 O 35 Head left n. o.43  
R 43 Same die o. o.44  
a. o.43 p. o.43  
b. o.42  
c. o.42
- 58 O 36 Head left  
R 43 Same die  
a. o.42  
b. o.42
- 59 O 36 Same die  
R 44 Incuse punch  
a. o.42
- 60 O 35 Same die as 57  
R 44 Same die  
a. o.44  
b. o.43  
c. o.45  
d. o.41
- 61 O 37 Head left  
R 45 Incuse punch  
a. o.45  
b. o.45  
\*c. o.43  
d. o.41
- 62 O 38 Head left  
R 45 Same die  
a. o.50  
b. o.44  
c. o.43  
d. o.44  
e. o.42  
f. o.44  
g. o.44  
h. o.41  
\*i. o.42
- 63 O 39 Head left  
R 45 Same die  
a. o.43  
b. o.44  
\*c. o.42  
d. o.42  
e. o.43  
f. o.43  
g. o.43  
h. o.46  
i. o.43  
j. o.40  
k. o.42  
l. o.44  
m. o.44  
n. o.43  
o. o.41  
p. o.43
- 64 O 40 Head left  
R 46 Incuse punch  
a. o.43  
b. o.42  
c. o.42  
d. o.43
- 65 O 41 Head left  
R 46 Same die  
a. o.42  
b. o.43
- 66 O 42 Head left  
R 46 Same die  
a. o.41  
\*b. o.42

- |   |  |
|---|--|
| <p>67 O 43 Head left<br/>R 46 Same die<br/>a. 0.45</p> <p>68 O 44 Head left<br/>R 46 Same die<br/>*a. 0.43</p> <p>69 O 45 Head left<br/>R 46 Same die<br/>a. 0.43</p> <p>70 O 46 Head left<br/>R 47 Incuse punch<br/>a. 0.45<br/>b. 0.44<br/>c. 0.42</p> <p>71 O 47 Head left<br/>R 47 Same die<br/>a. 0.40<br/>b. 0.43</p> <p>72 O 48 Head left<br/>R 48 Incuse punch<br/>a. 0.35</p> <p>73 O 48 Same die<br/>R 49 Incuse punch<br/>a. 0.40</p> <p>74 O 48 Same die<br/>R 50 Incuse punch<br/>a. 0.43<br/>b. 0.45<br/>c. 0.43<br/>d. 0.44<br/>e. 0.42<br/>f. 0.46<br/>g. 0.44<br/>h. 0.43<br/>*i. 0.47<br/>j. 0.42</p> | <p>75 O 49 Head left<br/>R 50 Same die<br/>a. 0.42<br/>b. 0.41<br/>c. 0.43<br/>*d. 0.44<br/>e. 0.41<br/>f. 0.43<br/>g. 0.43<br/>h. 0.43<br/>i. 0.44</p> <p>76 O 49 Same die<br/>R 51 Incuse punch<br/>a. 0.39</p> <p>77 O 50 Head left<br/>R 52 Incuse punch<br/>a. 0.43<br/>b. 0.43<br/>c. 0.44<br/>d. 0.44<br/>e. 0.43</p> <p>78 O 51 Head left<br/>R 52 Same die<br/>a. 0.43<br/>b. 0.41</p> <p>79 O 52 Head left<br/>R 52 Same die<br/>a. 0.43<br/>b. 0.43</p> <p>80 O 53 Head left<br/>R 52 Same die<br/>a. 0.43</p> <p>81 O 54 Head left<br/>R 52 Same die<br/>a. 0.43<br/>b. 0.43</p> |
|---|--|

- |  |   |
|--|---|
| <p>82 O 54 Same die<br/>R 53 Incuse punch<br/>a. 0.43<br/>b. 0.42<br/>c. 0.42<br/>*d. 0.42<br/>e. 0.41<br/>f. 0.43</p> <p>83 O 55 Head left<br/>R 53 Same die<br/>*a. 0.43</p> <p>84 O 56 Head left<br/>R 53 Same die<br/>a. 0.42<br/>*b. 0.43</p> <p>85 O 57 Head left, with curly hair<br/>R 54 Incuse punch<br/>a. 0.44<br/>b. 0.44<br/>c. 0.43<br/>d. 0.43<br/>*e. 0.43</p> <p>86 O 58 Head left<br/>R 55 Incuse punch<br/>a. 0.39</p> <p>87 O 59 Head left<br/>R 55 Same die<br/>*a. 0.39</p> <p>88 O 59 Same die<br/>R 56 Incuse punch<br/>a. 0.37</p> <p>89 O 60 Head left<br/>R 57 Incuse punch<br/>a. 0.43</p> <p>90 O 61 Head left<br/>R 58 Incuse punch<br/>a. 0.39<br/>b. 0.47</p> | <p>91 O 62 Head left<br/>R 58 Same die<br/>a. 0.40</p> <p>92 O 62 Same die<br/>R 59 Incuse punch<br/>a. 0.45<br/>b. 0.41</p> <p>93 O 63 Head left<br/>R 60 Incuse punch<br/>a. 0.37</p> <p>94 O 64 Head left<br/>R 60 Same die<br/>a. 0.34</p> <p>95 O 64 Same die<br/>R 61 Incuse punch<br/>a. 0.37<br/>b. 0.39<br/>c. 0.40</p> <p>96 O 64 Same die<br/>R 62 Incuse punch<br/>a. 0.37</p> <p>97 O 65 Head left<br/>R 63 Incuse punch<br/>a. 0.43<br/>b. 0.44</p> <p>98 O 66 Head left<br/>R 63 Same die<br/>a. 0.44</p> <p>99 O 66 Same die<br/>R 64 Incuse punch<br/>a. 0.43</p> <p>100 O 66 Same die<br/>R 65 Incuse punch<br/>a. 0.43</p> |
|--|---|

- |  |  |
|--|--|
| <p>101 O 67 Head left<br/>R 65 Same die<br/>a. o.41<br/>b. o.42</p> <p>102 O 67 Same die<br/>R 66 Incuse punch<br/>a. o.43<br/>b. o.43<br/>c. o.43</p> <p>103 O 68 Head left<br/>R 66 Same die<br/>a. o.44<br/>b. o.44</p> <p>104 O 69 Head left<br/>R 65 Same die as 100<br/>a. o.43<br/>b. o.43<br/>c. o.43<br/>d. o.42</p> <p>105 O 69 Same die<br/>R 67 Incuse punch<br/>a. o.41</p> <p>106 O 70 Head left<br/>R 68 Incuse punch<br/>a. o.38</p> <p>107 O 71 Head left<br/>R 69 Incuse punch<br/>a. o.43<br/>b. o.46<br/>c. o.42<br/>d. o.43</p> <p>108 O 72 Head left<br/>R 69 Same die<br/>a. o.42</p> <p>109 O 73 Head left<br/>R 70 Incuse punch<br/>a. o.40</p> | <p>110 O 73 Same die<br/>R 71 Incuse punch<br/>a. o.42<br/>b. o.43</p> <p>111 O 74 Head left<br/>R 71 Same die<br/>a. o.43<br/>b. o.43</p> <p>112 O 75 Head left<br/>R 72 Incuse punch<br/>a. o.42</p> <p>113 O 76 Head left<br/>R 72 Same die<br/>a. o.43<br/>b. o.33</p> <p>114 O 76 Same die<br/>R 73 Incuse punch<br/>a. o.42</p> <p>115 O 76 Same die<br/>R 74 Incuse punch<br/>a. o.44<br/>b. o.43</p> <p>116 O 77 Head left<br/>R 74 Same die<br/>a. o.42<br/>b. o.46<br/>c. o.41</p> <p>117 O 76 Same die as 114<br/>R 75 Incuse punch<br/>a. o.43</p> <p>118 O 78 Head left<br/>R 75 Same die<br/>a. o.43<br/>b. o.45</p> <p>119 O 79 Head left<br/>R 75 Same die<br/>a. o.47</p> |
|--|--|



- |  |   |
|--|---|
| <p>120 O 80 Head left<br/>R 76 Incuse punch<br/>a. 0.45</p> <p>121 O 80 Same die<br/>R 77 Incuse punch<br/>a. 0.44<br/>b. 0.43</p> <p>122 O 80 Same die<br/>R 78 Incuse punch<br/>a. 0.41</p> <p>123 O 81 Head left<br/>R 79 Incuse punch<br/>a. 0.45</p> <p>124 O 81 Same die<br/>R 80 Incuse punch<br/>a. 0.43<br/>b. 0.39</p> <p>125 O 81 Same die<br/>R 81 Incuse punch<br/>a. 0.42</p> <p>126 O 82 Head left<br/>R 82 Incuse punch<br/>a. 0.42</p> <p>127 O 83 Head left<br/>R 83 Incuse punch<br/>a. 0.44<br/>b. 0.42</p> <p>128 O 84 Head left<br/>R 83 Same die<br/>a. 0.39</p> <p>129 O 84 Same die<br/>R 84 Incuse punch<br/>a. 0.40</p> <p>130 O 85 Head left<br/>R 85 Incuse punch<br/>a. 0.42</p> | <p>131 O 85 Same die<br/>R 86 Incuse punch<br/>a. 0.43<br/>b. 0.43<br/>c. 0.42</p> <p>132 O 86 Head left<br/>R 86 Same die<br/>a. 0.43</p> <p>133 O 86 Same die<br/>R 87 Incuse punch<br/>a. 0.42</p> <p>134 O 87 Head left<br/>R 88 Incuse punch<br/>a. 0.33</p> <p>135 O 88 Head left<br/>R 89 Incuse punch<br/>a. 0.43</p> <p>136 O 89 Head left<br/>R 89 Same die<br/>a. 0.43</p> <p>137 O 90 Head left<br/>R 90 Incuse punch<br/>a. 0.44</p> <p>138 O 91 Head left<br/>R 91 Incuse punch<br/>a. 0.45<br/>b. 0.45<br/>c. 0.43<br/>d. 0.42<br/>e. 0.44<br/>f. 0.43<br/>g. 0.42</p> <p>139 O 92 Head left<br/>R 91 Same die<br/>a. 0.41<br/>b. 0.44</p> |
|--|---|

- |   |  |
|---|--|
| <p>140 O 93 Head left<br/>R 92 Incuse punch<br/>a. 0.45</p> <p>141 O 93 Same die<br/>R 93 Incuse punch<br/>a. 0.43</p> <p>142 O 94 Head left<br/>R 94 Incuse punch<br/>a. 0.44</p> <p>143 O 95 Head left<br/>R 94 Same die<br/>a. 0.42</p> <p>144 O 96 Head left<br/>R 95 Incuse punch<br/>a. 0.38</p> <p>145 O 97 Head left<br/>R 96 Incuse punch<br/>a. 0.38</p> <p>146 O 98 Head left<br/>R 97 Incuse punch<br/>a. 0.46</p> <p>147 O 99 Head left<br/>R 98 Incuse punch<br/>a. 0.35</p> <p>148 O 100 Head left<br/>R 99 Incuse punch<br/>a. 0.43</p> <p>149 O 101 Head left<br/>R 100 Incuse punch<br/>a. 0.43<br/>b. 0.43</p> <p>150 O 102 Head left<br/>R 101 Incuse punch<br/>a. 0.44<br/>b. 0.44<br/>c. 0.42</p> | <p>151 O 103 Head left<br/>R 101 Same die<br/>a. 0.42<br/>b. 0.43</p> <p>152 O 104 Head left<br/>R 101 Same die<br/>a. 0.43</p> <p>153 O 104 Same die<br/>R 102 Incuse punch<br/>a. 0.41<br/>b. 0.44<br/>c. 0.44</p> <p>154 O 105 Head left<br/>R 103 Incuse punch<br/>a. 0.40</p> <p>155 O 106 Head left<br/>R 104 Incuse punch<br/>a. 0.42<br/>b. 0.44</p> <p>156 O 106 Same die<br/>R 105 Incuse punch<br/>a. 0.42</p> <p>157 O 106 Same die<br/>R 106 Incuse punch<br/>a. 0.44</p> <p>158 O 107 Head left<br/>R 107 Incuse punch<br/>a. 0.44</p> <p>159 O 107 Same die<br/>R 108 Incuse punch<br/>a. 0.41</p> <p>160 O 108 Head left<br/>R 108 Same die<br/>a. 0.43</p> <p>161 O 108 Same die<br/>R 109 Incuse punch<br/>a. 0.44</p> |
|---|--|

- |  |  |
|--|--|
| <p>162 O 108 Same die<br/>R 110 Incuse punch<br/>a. 0.44</p> <p>163 O 109 Head left<br/>R 111 Incuse punch<br/>a. 0.41</p> <p>164 O 110 Head left<br/>R 112 Incuse punch<br/>a. 0.40</p> <p>165 O 110 Same die<br/>R 113 Incuse punch<br/>a. 0.37</p> <p>166 O 111 Head left<br/>R 114 Incuse punch<br/>a. 0.42<br/>b. 0.42</p> <p>167 O 112 Head left<br/>R 114 Same die<br/>a. 0.42</p> <p>168 O 113 Head left<br/>R 114 Same die<br/>a. 0.43</p> <p>169 O 114 Head left<br/>R 115 Incuse punch<br/>a. 0.50</p> <p>170 O 115 Head left<br/>R 116 Incuse punch<br/>a. 0.44</p> <p>171 O 115 Same die<br/>R 117 Incuse punch<br/>a. 0.45</p> <p>172 O 116 Head left<br/>R 118 Incuse punch<br/>a. 0.43<br/>b. 0.44</p> | <p>173 O 117 Head left<br/>R 118 Same die<br/>a. 0.42<br/>b. 0.46<br/>c. 0.45</p> <p>174 O 118 Head left<br/>R 119 Incuse punch<br/>a. 0.43</p> <p>175 O 119 Head left<br/>R 120 Incuse punch<br/>a. 0.43</p> <p>176 O 120 Head left<br/>R 120 Same die<br/>a. 0.44</p> <p>177 O 121 Head left<br/>R 121 Incuse punch<br/>a. 0.43</p> <p>178 O 121 Same die<br/>R 122 Incuse punch<br/>a. 0.42</p> <p>179 O 122 Head left<br/>R 122 Same die<br/>a. 0.44<br/>b. 0.43<br/>c. 0.43<br/>d. 0.44</p> <p>180 O 123 Head left<br/>R 122 Same die<br/>a. 0.42</p> <p>181 O 123 Same die<br/>R 123 Incuse punch<br/>a. 0.40</p> <p>182 O 124 Head left<br/>R 122 Same die as 180<br/>a. 0.43<br/>b. 0.42<br/>c. 0.43</p> |
|--|--|

- |   |   |
|---|---|
| <p>183 O 124 Same die<br/>R 124 Incuse punch<br/>a. 0.44<br/>b. 0.43<br/>c. 0.43<br/>d. 0.43<br/>e. 0.44</p> <p>184 O 124 Same die<br/>R 125 Incuse punch<br/>a. 0.43<br/>b. 0.43<br/>c. 0.42</p> <p>185 O 125 Head left<br/>R 125 Same die<br/>a. 0.43</p> <p>186 O 126 Head left<br/>R 126 Same die<br/>a. 0.44</p> <p>187 O 127 Head left<br/>R 127 Incuse punch<br/>a. 0.48</p> <p>188 O 128 Head left<br/>R 128 Incuse punch<br/>a. 0.45</p> <p>189 O 129 Head left<br/>R 129 Incuse punch<br/>a. 0.47</p> <p>190 O 130 Head left<br/>R 130 Incuse punch<br/>a. 0.43</p> <p>191 O 131 Head left<br/>R 131 Incuse punch<br/>a. 0.43<br/>b. 0.44</p> | <p>192 O 132 Head left<br/>R 131 Same die<br/>a. 0.44<br/>b. 0.44<br/>c. 0.43<br/>d. 0.42<br/>e. 0.41</p> <p>193 O 133 Head left<br/>R 132 Incuse punch<br/>a. 0.43</p> <p>194 O 134 Head left<br/>R 133 Incuse punch<br/>a. 0.37</p> <p>195 O 135 Head left<br/>R 134 Incuse punch<br/>a. 0.34</p> <p>196 O 136 Head left<br/>R 135 Incuse punch<br/>a. 0.30</p> |
|---|---|

## Forty-eighths

- |    |   |    |  |
|----|---|----|--|
| 1  | O 1 Head right<br>R 1 Incuse punch<br>a. 0.19   | 13 | O 11 Head right<br>R 12 Incuse punch<br>a. 0.17        |
| 2  | O 2 Head right<br>R 2 Incuse punch<br>a. 0.20   | 14 | O 12 Head right<br>R 13 Incuse punch<br>*a. 0.21       |
| 3  | O 3 Head right<br>R 2 Same die<br>a. 0.20       | 15 | O 13 Head right<br>R 14 Incuse punch<br>*a. 0.20       |
| 4  | O 4 Head right<br>R 3 Incuse punch<br>*a. 0.17  | 16 | O 14 Head right<br>R 15 Incuse punch<br>a. 0.18        |
| 5  | O 5 Head right<br>R 4 Incuse punch<br>*a. 0.18  | 17 | O 15 Head right<br>R 15 Same die<br>*a. 0.21           |
| 6  | O 6 Head right<br>R 5 Incuse punch<br>a. 0.17   | 18 | O 16 Head right<br>R 16 Incuse punch<br>a. 0.21        |
| 7  | O 7 Head right<br>R 6 Incuse punch<br>a. 0.20   | 19 | O 17 Head left<br>R 17 Incuse punch<br>a. 0.22         |
| 8  | O 8 Head right<br>R 7 Incuse punch<br>a. 0.24   | 20 | O 18 Head left<br>R 17 Same die<br>a. 0.21             |
| 9  | O 8 Same die<br>R 8 Incuse punch<br>a. 0.20     | 21 | O 18 Same die<br>R 18 Incuse punch<br>a. 0.23          |
| 10 | O 9 Head right<br>R 9 Incuse punch<br>*a. 0.20  | 22 | O 19 Head left<br>R 18 Same die<br>a. 0.22<br>*b. 0.22 |
| 11 | O 9 Same die<br>R 10 Incuse punch<br>a. 0.21    | 23 | O 19 Same die<br>R 19 Incuse punch<br>a. 0.25          |
| 12 | O 10 Head right<br>R 11 Incuse punch<br>a. 0.22 |    |  |

- |  |  |
|--|--|
| <p>24 O 19 Same die<br/>R 20 Incuse punch<br/>a. 0.22<br/>*b. 0.22<br/>c. 0.22</p> <p>25 O 19 Same die<br/>R 21 Incuse punch<br/>a. 0.21</p> <p>26 O 20 Head left<br/>R 21 Same die<br/>a. 0.19</p> <p>27 O 20 Same die<br/>R 22 Incuse punch<br/>a. 0.21</p> <p>28 O 20 Same die<br/>R 23 Incuse punch<br/>a. 0.24<br/>b. 0.20<br/>c. 0.21</p> <p>29 O 21 Head left<br/>R 23 Same die<br/>a. 0.22</p> <p>30 O 21 Same die<br/>R 24 Incuse punch<br/>a. 0.21</p> <p>31 O 21 Same die<br/>R 25 Incuse punch<br/>a. 0.19</p> <p>32 O 21 Same die<br/>R 26 Incuse punch<br/>a. 0.20<br/>b. 0.21<br/>c. 0.21<br/>d. 0.21</p> <p>33 O 21 Same die<br/>R 27 Incuse punch<br/>a. 0.21</p> | <p>34 O 21 Same die<br/>R 28 Incuse punch<br/>*a. 0.22</p> <p>35 O 22 Head left<br/>R 28 Same die<br/>*a. 0.23</p> <p>36 O 22 Same die<br/>R 29 Incuse punch<br/>a. 0.23</p> <p>37 O 23 Head left<br/>R 28 Same die as 35<br/>*a. 0.21</p> <p>38 O 24 Head left<br/>R 27 Same die as 33<br/>a. 0.22</p> <p>39 O 24 Same die<br/>R 30 Incuse punch<br/>a. 0.20</p> <p>40 O 24 Same die<br/>R 31 Incuse punch<br/>a. 0.22<br/>b. 0.20</p> <p>41 O 24 Same die<br/>R 32 Incuse punch<br/>*a. 0.20</p> <p>42 O 25 Head left<br/>R 32 Same die<br/>a. 0.17</p> <p>43 O 26 Head left<br/>R 31 Same die as 40<br/>*a. 0.25</p> <p>44 O 26 Same die<br/>R 33 Incuse punch<br/>a. 0.20</p> <p>45 O 27 Head left<br/>R 34 Incuse punch<br/>a. 0.21</p> |
|--|--|

- |  |   |
|--|---|
| <p>46 O 27 Same die<br/>R 35 Incuse punch<br/>a. 0.22</p> <p>47 O 28 Head left<br/>R 35 Same die<br/>a. 0.22</p> <p>48 O 28 Same die<br/>R 36 Incuse punch<br/>a. 0.21<br/>b. 0.20<br/>c. 0.22</p> <p>49 O 29 Head left<br/>R 37 Incuse punch<br/>a. 0.20<br/>b. 0.20</p> <p>50 O 29 Same die<br/>R 36 Same die as 48<br/>a. 0.19<br/>b. 0.17</p> <p>51 O 30 Head left<br/>R 36 Same die<br/>a. 0.22</p> <p>52 O 31 Head left<br/>R 36 Same die<br/>a. 0.23<br/>b. 0.23</p> <p>53 O 32 Head left<br/>R 36 Same die<br/>a. 0.20</p> <p>54 O 33 Head left<br/>R 36 Same die<br/>a. 0.22</p> <p>55 O 34 Head left<br/>R 36 Same die<br/>a. 0.20</p> | <p>56 O 35 Head left<br/>R 36 Same die<br/>a. 0.22<br/>b. 0.21<br/>c. 0.20<br/>d. 0.21</p> <p>57 O 35 Same die<br/>R 38 Incuse punch<br/>a. 0.21</p> <p>58 O 36 Head left<br/>R 36 Same die as 56<br/>a. 0.21</p> <p>59 O 36 Same die<br/>R 38 Same die as 57<br/>a. 0.21<br/>b. 0.21<br/>c. 0.20<br/>d. 0.19<br/>e. 0.19<br/>f. 0.20<br/>g. 0.23<br/>h. 0.21<br/>i. 0.22<br/>j. 0.21</p> <p>60 O 37 Head left<br/>R 36 Same die as 58<br/>a. 0.19</p> <p>61 O 37 Same die<br/>R 39 Incuse punch<br/>a. 0.20</p> <p>62 O 37 Same die<br/>R 40 Incuse punch<br/>a. 0.19</p> <p>63 O 38 Head left<br/>R 40 Same die<br/>a. 0.22</p> |
|--|---|

- |    |  |    |   |
|----|--|----|---|
| 64 | O 38 Same die<br>R 41 Incuse punch<br>a. 0.22            | 75 | O 44 Head left<br>R 44 Same die<br>a. 0.21<br>b. 0.21 |
| 65 | O 39 Head left<br>R 41 Same die<br>a. 0.20               | 76 | O 44 Same die<br>R 47 Incuse punch<br>a. 0.22         |
| 66 | O 40 Head left<br>R 36 Same die as 60<br>a. 0.19         | 77 | O 44 Same die<br>R 48 Incuse punch<br>a. 0.20         |
| 67 | O 40 Same die<br>R 42 Incuse punch<br>a. 0.20            | 78 | O 44 Same die<br>R 49 Incuse punch<br>a. 0.17         |
| 68 | O 40 Same die<br>R 43 Incuse punch<br>a. 0.22            | 79 | O 44 Same die<br>R 45 Same die as 70<br>a. 0.21       |
| 69 | O 40 Same die<br>R 44 Incuse punch<br>a. 0.22            | 80 | O 45 Head left<br>R 48 Same die as 77<br>a. 0.17      |
| 70 | O 40 Same die<br>R 45 Incuse punch<br>a. 0.20<br>b. 0.21 | 81 | O 46 Head left<br>R 48 Same die<br>a. 0.21            |
| 71 | O 40 Same die<br>R 46 Incuse punch<br>a. 0.21<br>b. 0.21 | 82 | O 47 Head left<br>R 45 Same die as 79<br>a. 0.20      |
| 72 | O 41 Head left<br>R 44 Same die as 69<br>a. 0.20         | 83 | O 48 Head left<br>R 45 Same die<br>a. 0.23            |
| 73 | O 42 Head left<br>R 44 Same die<br>a. 0.24               | 84 | O 49 Head left<br>R 45 Same die<br>a. 0.22            |
| 74 | O 43 Head left<br>R 44 Same die<br>a. 0.20               | 85 | O 50 Head left<br>R 45 Same die<br>a. 0.21<br>b. 0.22 |



- |   |   |
|---|---|
| <p>86 O 51 Head left<br/>R 45 Same die<br/>a. 0.20</p> <p>87 O 52 Head left<br/>R 46 Incuse punch<br/>a. 0.22</p> <p>88 O 52 Same die<br/>R 50 Incuse punch<br/>a. 0.20</p> <p>89 O 52 Same die<br/>R 51 Incuse punch<br/>a. 0.20</p> <p>90 O 52 Same die<br/>R 52 Incuse punch<br/>a. 0.22</p> <p>91 O 53 Head left<br/>R 45 Same die as 86<br/>a. 0.22<br/>b. 0.20</p> <p>92 O 53 Same die<br/>R 46 Same die as 87<br/>a. 0.20</p> <p>93 O 53 Same die<br/>R 53 Incuse punch<br/>a. 0.20</p> <p>94 O 53 Same die<br/>R 54 Incuse punch<br/>a. 0.20</p> <p>95 O 53 Same die<br/>R 55 Incuse punch<br/>a. 0.21</p> <p>96 O 54 Head left<br/>R 55 Same die<br/>a. 0.22</p> | <p>97 O 55 Head left<br/>R 55 Same die<br/>a. 0.23</p> <p>98 O 55 Same die<br/>R 56 Incuse punch<br/>a. 0.22</p> <p>99 O 56 Head left<br/>R 57 Incuse punch<br/>a. 0.21</p> <p>100 O 56 Same die<br/>R 58 Incuse punch<br/>a. 0.21</p> <p>101 O 56 Same die<br/>R 59 Incuse punch<br/>a. 0.21</p> <p>102 O 57 Head left<br/>R 60 Incuse punch<br/>a. 0.20</p> <p>103 O 58 Head left<br/>R 60 Same die<br/>a. 0.20</p> <p>104 O 59 Head left<br/>R 59 Same die as 101<br/>a. 0.23<br/>b. 0.21</p> <p>105 O 59 Same die<br/>R 60 Same die as 103<br/>a. 0.22</p> <p>106 O 59 Same die<br/>R 61 Incuse punch<br/>a. 0.22</p> <p>107 O 59 Same die<br/>R 62 Incuse punch<br/>a. 0.21</p> <p>108 O 60 Head left<br/>R 61 Same die as 106<br/>a. 0.21</p> |
|---|---|

- |     |   |     |   |
|-----|---|-----|---|
| 109 | O 61 Head left<br>R 60 Same die as 105<br>a. 0.21           | 120 | O 65 Head left<br>R 66 Same die<br>a. 0.21<br>b. 0.21<br>c. 0.20  |
| 110 | O 61 Same die<br>R 63 Incuse punch<br>a. 0.22               | 121 | O 66 Head left<br>R 67 Incuse punch<br>a. 0.20  |
| 111 | O 62 Head left<br>R 60 Same die as 109<br>a. 0.23           | 122 | O 67 Head left<br>R 67 Same die<br>a. 0.19<br>b. 0.22   |
| 112 | O 62 Same die<br>R 63 Same die as 110<br>a. 0.21<br>b. 0.20 | 123 | O 67 Same die<br>R 68 Incuse punch<br>a. 0.20   |
| 113 | O 62 Same die<br>R 64 Incuse punch<br>a. 0.22               | 124 | O 67 Same die<br>R 69 Incuse punch<br>a. 0.21   |
| 114 | O 63 Head left<br>R 60 Same die as 111<br>a. 0.22           | 125 | O 68 Head left<br>R 70 Incuse punch<br>a. 0.21  |
| 115 | O 63 Same die<br>R 61 Same die as 108<br>a. 0.20            | 126 | O 69 Head left<br>R 70 Same die<br>a. 0.21<br>b. 0.22<br>c. 0.21<br>d. 0.19<br>e. 0.22<br>f. 0.21<br>g. 0.20<br>h. 0.21 |
| 116 | O 63 Same die<br>R 62 Same die as 107<br>a. 0.21            | 127 | O 70 Head left<br>R 70 Same die<br>a. 0.18  |
| 117 | O 63 Same die<br>R 64 Same die as 113<br>a. 0.19            | 128 | O 71 Head left<br>R 70 Same die<br>a. 0.21  |
| 118 | O 63 Same die<br>R 65 Incuse punch<br>a. 0.21               |     |   |
| 119 | O 64 Head left<br>R 66 Incuse punch<br>a. 0.20              |     |   |

- |  |   |
|--|---|
| <p>129 O 72 Head left<br/>R 71 Incuse punch<br/>a. 0.18</p> <p>130 O 72 Same die<br/>R 70 Same die as 128<br/>a. 0.22<br/>b. 0.20<br/>c. 0.22<br/>d. 0.20</p> <p>131 O 73 Head left<br/>R 72 Incuse punch<br/>a. 0.20</p> <p>132 O 73 Same die<br/>R 70 Same die as 130<br/>a. 0.21<br/>b. 0.21</p> <p>133 O 74 Head left<br/>R 70 Same die<br/>a. 0.21<br/>*b. 0.20</p> <p>134 O 75 Head left<br/>R 70 Same die<br/>a. 0.21<br/>b. 0.21</p> <p>135 O 76 Head left<br/>R 70 Same die<br/>*a. 0.21<br/>b. 0.21<br/>c. 0.19</p> <p>136 O 77 Head left<br/>R 70 Same die<br/>a. 0.21</p> <p>137 O 78 Head left<br/>R 70 Same die<br/>*a. 0.21<br/>b. 0.19</p> | <p>138 O 79 Head left<br/>R 70 Same die<br/>a. 0.20<br/>b. 0.20</p> <p>139 O 80 Head left<br/>R 70 Same die<br/>a. 0.22<br/>b. 0.21</p> <p>140 O 81 Head left<br/>R 70 Same die<br/>a. 0.20</p> <p>141 O 82 Head left<br/>R 70 Same die<br/>a. 0.20</p> <p>142 O 83 Head left<br/>R 70 Same die<br/>a. 0.20<br/>b. 0.24</p> <p>143 O 84 Head left<br/>R 70 Same die<br/>a. 0.20</p> <p>144 O 85 Head left<br/>R 70 Same die<br/>a. 0.20</p> <p>145 O 86 Head left<br/>R 70 Same die<br/>a. 0.20</p> <p>146 O 86 Same die<br/>R 73 Incuse punch<br/>a. 0.21</p> <p>147 O 86 Same die<br/>R 74 Incuse punch<br/>a. 0.21</p> <p>148 O 87 Head left<br/>R 74 Same die<br/>a. 0.22</p> |
|--|---|

- |     |                      |                      |
|-----|----------------------|----------------------|
| 149 | O 88 Head left       | i. 0.22              |
|     | R 74 Same die        | j. 0.19              |
|     | a. 0.21              |                      |
| 150 | O 89 Head left       | 158 O 92 Head left   |
|     | R 70 Same die as 145 | R 79 Same die        |
|     | a. 0.20              | a. 0.20              |
|     | b. 0.20              | b. 0.20              |
| 151 | O 89 Same die        | 159 O 92 Same die    |
|     | R 74 Same die as 149 | R 80 Incuse punch    |
|     | a. 0.20              | a. 0.22              |
|     |                      | b. 0.22              |
| 152 | O 89 Same die        | 160 O 93 Head left   |
|     | R 75 Incuse punch    | R 80 Same die        |
|     | a. 0.20              | a. 0.21              |
| 153 | O 89 Same die        | 161 O 94 Head left   |
|     | R 76 Incuse punch    | R 80 Same die        |
|     | a. 0.21              | a. 0.18              |
|     | b. 0.21              |                      |
| 154 | O 90 Head left       | 162 O 95 Head left   |
|     | R 76 Same die        | R 80 Same die        |
|     | a. 0.19              | a. 0.20              |
|     | b. 0.21              |                      |
| 155 | O 90 Same die        | 163 O 95 Same die    |
|     | R 77 Incuse punch    | R 81 Incuse punch    |
|     | a. 0.21              | a. 0.19              |
| 156 | O 91 Head left       | 164 O 96 Head left   |
|     | R 78 Incuse punch    | R 81 Same die        |
|     | a. 0.18              | a. 0.20              |
| 157 | O 91 Same die        | 165 O 97 Head left   |
|     | R 79 Incuse punch    | R 80 Same die as 162 |
|     | a. 0.21              | a. 0.22              |
|     | b. 0.22              | b. 0.20              |
|     | c. 0.22              |                      |
|     | d. 0.20              | 166 O 97 Same die    |
|     | e. 0.18              | R 82 Incuse punch    |
|     | f. 0.21              | a. 0.20              |
|     | g. 0.21              | b. 0.21              |
|     | h. 0.22              | 167 O 97 Same die    |
|     |                      | R 83 Incuse punch    |
|     |                      | a. 0.18              |

- |     |  |     |  |
|-----|--|-----|--|
| 168 | O 97 Same die<br>R 84 Incuse punch<br>a. 0.21                            | 179 | O 104 Same die<br>R 90 Incuse punch<br>a. 0.22                       |
| 169 | O 98 Head left<br>R 82 Same die as 166<br>a. 0.20<br>b. 0.21             | 180 | O 104 Same die<br>R 91 Incuse punch<br>a. 0.25                       |
| 170 | O 99 Head left<br>R 82 Same die<br>a. 0.21                               | 181 | O 105 Head left<br>R 91 Same die<br>a. 0.21<br>b. 0.20               |
| 171 | O 99 Same die<br>R 85 Incuse punch<br>a. 0.23                            | 182 | O 106 Head left<br>R 91 Same die<br>a. 0.20                          |
| 172 | O 100 Head left<br>R 86 Incuse punch<br>a. 0.22<br>b. 0.20               | 183 | O 107 Head left<br>R 91 Same die<br>a. 0.22                          |
| 173 | O 100 Same die<br>R 87 Incuse punch<br>a. 0.24                           | 184 | O 107 Same die<br>R 92 Incuse punch<br>a. 0.21<br>b. 0.22<br>c. 0.20 |
| 174 | O 101 Head left<br>R 87 Same die<br>a. 0.21                              | 185 | O 107 Same die<br>R 93 Incuse punch<br>a. 0.22                       |
| 175 | O 102 Head left<br>R 88 Incuse punch<br>a. 0.21                          | 186 | O 108 Head left<br>R 93 Same die<br>a. 0.21                          |
| 176 | O 102 Same die<br>R 89 Incuse punch<br>a. 0.21                           | 187 | O 108 Same die<br>R 92 Same die as 184<br>a. 0.21                    |
| 177 | O 103 Head left<br>R 89 Same die<br>a. 0.19                              | 188 | O 108 Same die<br>R 91 Same die as 183<br>a. 0.17                    |
| 178 | O 104 Head left<br>R 88 Same die as 175<br>a. 0.24<br>b. 0.22<br>c. 0.22 | 189 | O 109 Head left<br>R 92 Same die<br>a. 0.19                          |

- |     |  |     |   |
|-----|--|-----|---|
| 190 | O 110 Head left<br>R 91 Same die<br>a. 0.20                  | 201 | O 116 Same die<br>R 96 Incuse punch<br>a. 0.22                        |
| 191 | O 110 Same die<br>R 94 Incuse punch<br>*a. 0.22              | 202 | O 117 Head left<br>R 97 Incuse punch<br>a. 0.21                       |
| 192 | O 110 Same die<br>R 93 Incuse punch<br>a. 0.21               | 203 | O 117 Same die<br>R 98 Incuse punch<br>a. 0.20                        |
| 193 | O 111 Head left<br>R 93 Same die<br>a. 0.22<br>b. 0.20       | 204 | O 118 Head left<br>R 98 Same die<br>a. 0.20                           |
| 194 | O 112 Head left<br>R 93 Same die<br>a. 0.19                  | 205 | O 118 Same die<br>R 99 Incuse punch<br>a. 0.26                        |
| 195 | O 113 Head left<br>R 93 Same die<br>a. 0.23<br>b. 0.20       | 206 | O 118 Same die<br>R 100 Incuse punch<br>a. 0.22                       |
| 196 | O 113 Same die<br>R 95 Incuse punch<br>a. 0.20               | 207 | O 118 Same die<br>R 101 Incuse punch<br>a. 0.21<br>b. 0.21<br>c. 0.20 |
| 197 | O 114 Head left<br>R 95 Same die<br>a. 0.21                  | 208 | O 119 Head left<br>R 98 Same die as 204<br>a. 0.21                    |
| 198 | O 115 Head left<br>R 93 Incuse punch<br>a. 0.20              | 209 | O 119 Same die<br>R 102 Incuse punch<br>a. 0.22                       |
| 199 | O 115 Same die<br>R 95 Same die as 197<br>a. 0.24<br>b. 0.23 | 210 | O 119 Same die<br>R 101 Same die as 207<br>a. 0.18<br>b. 0.19         |
| 200 | O 116 Head left<br>R 95 Same die<br>a. 0.20                  | 211 | O 120 Head left<br>R 101 Same die<br>a. 0.21                          |

- |  |   |
|--|---|
| <p>212 O 121 Head left<br/>R 97 Incuse punch<br/>a. 0.23</p> <p>213 O 121 Same die<br/>R 103 Incuse punch<br/>a. 0.22</p> <p>214 O 122 Head left<br/>R 103 Same die<br/>a. 0.22</p> <p>215 O 122 Same die<br/>R 104 Incuse punch<br/>a. 0.20</p> <p>216 O 122 Same die<br/>R 105 Incuse punch<br/>a. 0.25</p> <p>217 O 123 Head left<br/>R 105 Same die<br/>a. 0.20</p> <p>218 O 123 Same die<br/>R 106 Incuse punch<br/>a. 0.22</p> <p>219 O 123 Same die<br/>R 107 Incuse punch<br/>a. 0.20<br/>b. 0.21</p> <p>220 O 124 Head left<br/>R 108 Incuse punch<br/>a. 0.22</p> <p>221 O 125 Head left<br/>R 108 Same die<br/>a. 0.20</p> <p>222 O 126 Head left<br/>R 107 Same die as 219<br/>a. 0.19</p> | <p>223 O 126 Same die<br/>R 108 Same die as 221<br/>a. 0.20</p> <p>224 O 126 Same die<br/>R 109 Incuse punch<br/>a. 0.21</p> <p>225 O 127 Head left<br/>R 109 Same die<br/>a. 0.21</p> <p>226 O 127 Same die<br/>R 110 Incuse punch<br/>a. 0.21</p> <p>227 O 127 Same die<br/>R 111 Incuse punch<br/>a. 0.20</p> <p>228 O 128 Head left<br/>R 111 Same die<br/>a. 0.21</p> <p>229 O 129 Head left<br/>R 111 Same die<br/>a. 0.21</p> <p>230 O 129 Same die<br/>R 112 Incuse punch<br/>a. 0.20</p> <p>231 O 129 Same die<br/>R 113 Incuse punch<br/>a. 0.19<br/>b. 0.22</p> <p>232 O 129 Same die<br/>R 114 Incuse punch<br/>a. 0.23</p> <p>233 O 130 Head left<br/>R 114 Same die<br/>a. 0.20</p> |
|--|---|

- |     |  |     |   |
|-----|--|-----|---|
| 234 | O 131 Head left<br>R 111 Incuse punch<br>a. 0.21               | 245 | O 134 Head left<br>R 119 Same die<br>a. 0.22                |
| 235 | O 131 Same die<br>R 115 Incuse punch<br>a. 0.22                | 246 | O 134 Same die<br>R 121 Incuse punch<br>a. 0.21             |
| 236 | O 131 Same die<br>R 116 Incuse punch<br>a. 0.21                | 247 | O 135 Head left<br>R 122 Incuse punch<br>a. 0.20            |
| 237 | O 131 Same die<br>R 117 Incuse punch<br>a. 0.22                | 248 | O 136 Head left<br>R 122 Incuse punch<br>a. 0.21<br>b. 0.21 |
| 238 | O 131 Same die<br>R 118 Incuse punch<br>a. 0.21                | 249 | O 137 Head left<br>R 123 Incuse punch<br>a. 0.20<br>b. 0.19 |
| 239 | O 131 Same die<br>R 119 Incuse punch<br>a. 0.21                | 250 | O 138 Head left<br>R 124 Incuse punch<br>a. 0.19            |
| 240 | O 132 Head left<br>R 117 Same die as 237<br>a. 0.21<br>b. 0.22 | 251 | O 138 Same die<br>R 125 Incuse punch<br>a. 0.22             |
| 241 | O 132 Same die<br>R 118 Same die as 238<br>a. 0.22             | 252 | O 138 Same die<br>R 126 Incuse punch<br>a. 0.20             |
| 242 | O 132 Same die<br>R 120 Incuse punch<br>a. 0.20                | 253 | O 139 Head left<br>R 126 Same die<br>a. 0.20                |
| 243 | O 132 Same die<br>R 119 Same die as 239<br>a. 0.23             | 254 | O 139 Same die<br>R 127 Incuse punch<br>a. 0.21<br>b. 0.22  |
| 244 | O 133 Head left<br>R 119 Same die<br>a. 0.23                   | 255 | O 140 Head left<br>R 127 Same die<br>a. 0.21                |



- |   |  |
|---|--|
| <p>256 O 141 Head left<br/>R 127 Same die<br/>a. 0.23</p> <p>257 O 141 Same die<br/>R 126 Same die as 253<br/>a. 0.22</p> <p>258 O 141 Same die<br/>R 128 Incuse punch<br/>a. 0.19</p> <p>259 O 141 Same die<br/>R 129 Incuse punch<br/>a. 0.21</p> <p>260 O 142 Head left<br/>R 127 Same die as 256<br/>a. 0.20</p> <p>261 O 142 Same die<br/>R 129 Same die as 259<br/>a. 0.22</p> <p>262 O 142 Same die<br/>R 130 Incuse punch<br/>a. 0.23</p> <p>263 O 143 Head left<br/>R 127 Same die as 260<br/>a. 0.23<br/>b. 0.20<br/>c. 0.22</p> <p>264 O 143 Same die<br/>R 131 Incuse punch<br/>a. 0.20</p> <p>265 O 143 Same die<br/>R 132 Incuse punch<br/>a. 0.21<br/>b. 0.19</p> <p>266 O 143 Same die<br/>R 133 Incuse punch<br/>a. 0.20</p> | <p>267 O 144 Head left<br/>R 127 Incuse punch<br/>*a. 0.23</p> <p>268 O 144 Same die<br/>R 132 Same die as 265<br/>a. 0.21<br/>b. 0.22<br/>c. 0.21</p> <p>269 O 144 Same die<br/>R 134 Incuse punch<br/>a. 0.20</p> <p>270 O 145 Head left<br/>R 127 Same die as 267<br/>a. 0.20<br/>b. 0.20</p> <p>271 O 145 Same die<br/>R 132 Same die as 268<br/>a. 0.23</p> <p>272 O 145 Same die<br/>R 135 Incuse punch<br/>a. 0.22</p> <p>273 O 145 Same die<br/>R 136 Incuse punch<br/>a. 0.21</p> <p>274 O 145 Same die<br/>R 137 Incuse punch<br/>a. 0.22<br/>b. 0.21</p> <p>275 O 146 Head left<br/>R 127 Same die as 270<br/>a. 0.22</p> <p>276 O 146 Same die<br/>R 136 Same die as 273<br/>a. 0.23</p> |
|---|--|

- |  |   |
|--|---|
| <p>277 O 146 Same die<br/>R 133 Same die as 274<br/>a. 0.22<br/>b. 0.22<br/>c. 0.21<br/>d. 0.22<br/>e. 0.20</p> <p>278 O 146 Same die<br/>R 138 Incuse punch<br/>a. 0.22</p> <p>279 O 146 Same die<br/>R 138 Incuse punch<br/>a. 0.20</p> <p>280 O 147 Head left<br/>R 127 Same die as 275<br/>a. 0.18<br/>b. 0.21</p> <p>281 O 147 Same die<br/>R 131 Same die as 277<br/>a. 0.20</p> <p>282 O 147 Same die<br/>R 139 Incuse punch<br/>a. 0.20</p> <p>283 O 148 Head left<br/>R 140 Incuse punch<br/>a. 0.21</p> <p>284 O 149 Head left<br/>R 140 Same die<br/>a. 0.23</p> <p>285 O 149 Same die<br/>R 141 Incuse punch<br/>a. 0.23</p> <p>286 O 150 Head left<br/>R 141 Same die<br/>a. 0.18<br/>b. 0.19</p> | <p>287 O 151 Head left<br/>R 141 Same die<br/>*a. 0.21</p> <p>288 O 152 Head left<br/>R 142 Incuse punch<br/>a. 0.22</p> <p>289 O 153 Head left<br/>R 142 Same die<br/>a. 0.20<br/>b. 0.22</p> <p>290 O 153 Same die<br/>R 143 Incuse punch<br/>*a. 0.21</p> <p>291 O 154 Head left<br/>R 143 Same die<br/>*a. 0.21</p> <p>292 O 155 Head left<br/>R 142 Same die as 289<br/>a. 0.22</p> <p>293 O 156 Head left<br/>R 144 Incuse punch<br/>*a. 0.22</p> <p>294 O 157 Head left<br/>R 145 Incuse punch<br/>a. 0.23<br/>b. 0.21<br/>c. 0.22<br/>d. 0.21<br/>e. 0.23</p> <p>295 O 158 Head left<br/>R 145 Same die<br/>a. 0.21<br/>b. 0.20<br/>c. 0.21</p> <p>296 O 159 Head left<br/>R 145 Same die<br/>a. 0.19</p> |
|--|---|

- |  |   |
|--|---|
| <p>297 O 159 Same die<br/>R 146 Incuse punch<br/>a. 0.20<br/>b. 0.20<br/>c. 0.22</p> <p>298 O 160 Head left<br/>R 146 Incuse punch<br/>a. 0.21<br/>b. 0.20<br/>c. 0.19</p> <p>299 O 160 Same die<br/>R 147 Incuse punch<br/>a. 0.20</p> <p>300 O 161 Head left<br/>R 148 Incuse punch<br/>a. 0.17</p> <p>301 O 162 Head left<br/>R 149 Incuse punch<br/>a. 0.18</p> <p>302 O 163 Head left<br/>R 150 Incuse punch<br/>a. 0.17</p> <p>303 O 164 Head left<br/>R 150 Same die<br/>a. 0.20</p> <p>304 O 165 Head left<br/>R 150 Same die<br/>a. 0.23</p> <p>305 O 166 Head left<br/>R 151 Incuse punch<br/>a. 0.19</p> <p>306 O 166 Same die<br/>R 152 Incuse punch<br/>a. 0.18<br/>b. 0.18<br/>c. 0.24</p> | <p>307 O 167 Head left<br/>R 153 Incuse punch<br/>a. 0.21</p> <p>308 O 168 Head left<br/>R 154 Incuse punch<br/>a. 0.20</p> <p>309 O 169 Head left<br/>R 154 Same die<br/>a. 0.19</p> <p>310 O 169 Same die<br/>R 155 Incuse punch<br/>a. 0.22</p> <p>311 O 169 Same die<br/>R 156 Incuse punch<br/>a. 0.23</p> <p>312 O 169 Same die<br/>R 157 Incuse punch<br/>a. 0.25</p> <p>313 O 170 Head left<br/>R 158 Incuse punch<br/>a. 0.20</p> <p>314 O 171 Head left<br/>R 159 Incuse punch<br/>a. 0.21</p> <p>315 O 171 Same die<br/>R 160 Incuse punch<br/>a. 0.19</p> <p>316 O 172 Head left<br/>R 160 Same die<br/>a. 0.22</p> <p>317 O 173 Head left<br/>R 161 Incuse punch<br/>a. 0.21</p> <p>318 O 174 Head left<br/>R 162 Incuse punch<br/>a. 0.20</p> |
|--|---|

- |     |  |     |  |
|-----|--|-----|--|
| 319 | O 174 Same die<br>R 163 Incuse punch<br>a. 0.20                    | 330 | O 182 Head left<br>R 171 Incuse punch<br>a. 0.23                       |
| 320 | O 175 Head left<br>R 164 Incuse punch<br>a. 0.21                   | 331 | O 183 Head left<br>R 172 Incuse punch<br>a. 0.23                       |
| 321 | O 176 Head left<br>R 164 Same die<br>a. 0.19                       | 332 | O 184 Head left<br>R 172 Same die<br>a. 0.19                           |
| 322 | O 176 Same die<br>R 165 Incuse punch<br>a. 0.20                    | 333 | O 184 Same die<br>R 173 Incuse punch<br>a. 0.19<br>b. 0.18             |
| 323 | O 177 Head left<br>R 165 Same die<br>a. 0.21<br>b. 0.21<br>c. 0.22 | 334 | O 184 Same die<br>R 174 Incuse punch<br>a. 0.19                        |
| 324 | O 178 Head left<br>R 166 Incuse punch<br>a. 0.18                   | 335 | O 184 Same die<br>R 175 Incuse punch<br>a. 0.18<br>b. 0.20             |
| 325 | O 179 Head left<br>R 166 Same die<br>a. 0.23                       | 336 | O 185 Head left<br>R 176 Incuse punch<br>a. 0.23<br>b. 0.20<br>c. 0.22 |
| 326 | O 180 Head left<br>R 167 Incuse punch<br>a. 0.19                   | 337 | O 185 Same die<br>R 177 Incuse punch<br>a. 0.20                        |
| 327 | O 181 Head left<br>R 168 Incuse punch<br>a. 0.22                   | 338 | O 185 Same die<br>R 178 Incuse punch<br>a. 0.23                        |
| 328 | O 181 Same die<br>R 169 Incuse punch<br>a. 0.23                    | 339 | O 186 Head left<br>R 179 Incuse punch<br>a. 0.17                       |
| 329 | O 181 Same die<br>R 170 Incuse punch<br>a. 0.21                    |     |  |

- 340 O 186 Same die  
R 180 Incuse punch  
\*a. 0.17
- 341 O 186 Same die  
R 181 Incuse punch  
a. 0.17
- 342 O 187 Head left  
R 182 Incuse punch  
a. 0.18
- 343 O 188 Head left  
R 182 Incuse punch  
a. 0.17
- 344 O 189 Head left  
R 183 Incuse punch  
a. 0.19
- 345 O 190 Head left  
R 184 Incuse punch  
a. 0.21
- 346 O 190 Same die  
R 185 Incuse punch  
\*a. 0.22
- 347 O 191 Head left  
R 186 Incuse punch  
a. 0.20
- 348 O 191 Same die  
R 187 Incuse punch  
\*a. 0.21
- 349 O 192 Head left  
R 188 Incuse punch  
a. 0.23
- 350 O 192 Same die  
R 189 Incuse punch  
a. 0.20
- 351 O 193 Head left  
R 190 Incuse punch  
a. 0.19  
b. 0.19
- 352 O 194 Head left  
R 191 Incuse punch  
a. 0.20  
b. 0.19
- 353 O 195 Head left  
R 192 Incuse punch  
a. 0.20
- 354 O 196 Head left  
R 192 Same die  
a. 0.21
- 355 O 196 Same die  
R 193 Incuse punch  
a. 0.20
- 356 O 196 Same die  
R 194 Incuse punch  
a. 0.18
- 357 O 197 Head left  
R 195 Incuse punch  
a. 0.19
- 358 O 198 Head left  
R 196 Incuse punch  
a. 0.20
- 359 O 199 Head left  
R 197 Incuse punch  
a. 0.19
- 360 O 200 Head left  
R 198 Incuse punch  
a. 0.18  
b. 0.20
- 361 O 201 Head left  
R 199 Incuse punch  
a. 0.20

- |     |  |     |   |
|-----|--|-----|---|
| 362 | O 202 Head left<br>R 200 Incuse punch<br>a. 0.21 | 374 | O 213 Head left<br>R 212 Incuse punch<br>a. 0.21  |
| 363 | O 203 Head left<br>R 201 Incuse punch<br>a. 0.23 | 375 | O 214 Head left<br>R 213 Incuse punch<br>a. 0.19  |
| 364 | O 204 Head left<br>R 202 Incuse punch<br>a. 0.16 | 376 | O 215 Head left<br>R 213 Same die<br>a. 0.15      |
| 365 | O 205 Head left<br>R 203 Incuse punch<br>a. 0.19 | 377 | O 215 Same die<br>R 214 Incuse punch<br>a. 0.20   |
| 366 | O 206 Head left<br>R 204 Incuse punch<br>a. 0.18 | 378 | O 216 Head left<br>R 215 Incuse punch<br>a. 0.17  |
| 367 | O 207 Head left<br>R 205 Incuse punch<br>a. 0.21 | 379 | O 217 Head left<br>R 216 Incuse punch<br>a. 0.21  |
| 368 | O 208 Head left<br>R 206 Incuse punch<br>a. 0.20 | 380 | O 218 Head left<br>R 217 Incuse punch<br>a. 0.19  |
| 369 | O 209 Head left<br>R 207 Incuse punch<br>a. 0.18 | 381 | O 219 Head left<br>R 217 Same die<br>a. 0.15      |
| 370 | O 210 Head left<br>R 208 Incuse punch<br>a. 0.26 | 382 | O 220 Head left<br>R 218 Incuse punch<br>a. 0.19  |
| 371 | O 211 Head left<br>R 209 Incuse punch<br>a. 0.20 | 383 | O 221 Head left<br>R 219 Incuse punch<br>*a. 0.19 |
| 372 | O 211 Same die<br>R 210 Incuse punch<br>a. 0.19  | 384 | O 222 Head left<br>R 220 Incuse punch<br>a. 0.21  |
| 373 | O 212 Head left<br>R 211 Incuse punch<br>a. 0.22 | 385 | O 222 Same die<br>R 221 Incuse punch<br>a. 0.21   |

- |     |   |     |  |
|-----|---|-----|--|
| 386 | O 223 Head left<br>R 222 Incuse punch<br>a. 0.18  | 398 | O 235 Head left<br>R 233 Incuse punch<br>a. 0.20 |
| 387 | O 224 Head left<br>R 223 Incuse punch<br>a. 0.18  | 399 | O 236 Head left<br>R 234 Incuse punch<br>a. 0.20 |
| 388 | O 225 Head left<br>R 223 Same die<br>a. 0.21      | 400 | O 236 Same die<br>R 235 Incuse punch<br>a. 0.21  |
| 389 | O 226 Head left<br>R 224 Incuse punch<br>*a. 0.19 | 401 | O 237 Head left<br>R 236 Incuse punch<br>a. 0.22 |
| 390 | O 227 Head left<br>R 225 Incuse punch<br>a. 0.22  | 402 | O 238 Head left<br>R 237 Incuse punch<br>a. 0.21 |
| 391 | O 228 Head left<br>R 226 Incuse punch<br>a. 0.26  | 403 | O 239 Head left<br>R 238 Incuse punch<br>a. 0.21 |
| 392 | O 229 Head left<br>R 227 Incuse punch<br>a. 0.24  | 404 | O 240 Head left<br>R 239 Incuse punch<br>a. 0.14 |
| 393 | O 230 Head left<br>R 228 Incuse punch<br>a. 0.20  | 405 | O 241 Head left<br>R 240 Incuse punch<br>a. 0.20 |
| 394 | O 231 Head left<br>R 229 Incuse punch<br>a. 0.20  | 406 | O 242 Head left<br>R 241 Incuse punch<br>a. 0.21 |
| 395 | O 232 Head left<br>R 230 Incuse punch<br>*a. 0.22 | 407 | O 243 Head left<br>R 242 Incuse punch<br>a. 0.19 |
| 396 | O 233 Head left<br>R 231 Incuse punch<br>a. 0.22  | 408 | O 244 Head left<br>R 243 Incuse punch<br>a. 0.21 |
| 397 | O 234 Head left<br>R 232 Incuse punch<br>a. 0.16  | 409 | O 245 Head left<br>R 244 Incuse punch<br>a. 0.17 |

- |   |   |
|---|---|
| <p>410 O 246 Head left<br/>R 245 Incuse punch<br/>a. 0.19</p> <p>411 O 247 Head left<br/>R 246 Incuse punch<br/>a. 0.21</p> <p>412 O 247 Same die<br/>R 247 Incuse punch<br/>a. 0.22</p> <p>413 O 248 Head left<br/>R 247 Same die<br/>a. 0.22</p> <p>414 O 249 Head left<br/>R 248 Incuse punch<br/>a. 0.21</p> <p>415 O 249 Head left<br/>R 249 Incuse punch<br/>a. 0.20</p> <p>416 O 250 Head left<br/>R 250 Incuse punch<br/>a. 0.18</p> <p>417 O 251 Head left<br/>R 251 Incuse punch<br/>a. 0.18</p> <p>418 O 252 Head left<br/>R 253 Incuse punch<br/>a. 0.20</p> <p>419 O 253 Head left<br/>R 253 Incuse punch<br/>a. 0.22</p> <p>420 O 254 Head left<br/>R 254 Incuse punch<br/>a. 0.17</p> <p>421 O 254 Same die<br/>R 255 Incuse punch<br/>a. 0.20</p> | <p>422 O 254 Same die<br/>R 256 Incuse punch<br/>a. 0.20</p> <p>423 O 254 Same die<br/>R 257 Incuse punch<br/>a. 0.20</p> <p>424 O 255 Head left<br/>R 258 Incuse punch<br/>a. 0.20<br/>b. 0.23</p> <p>425 O 257 Head left<br/>R 259 Incuse punch<br/>a. 0.21 Not illustrated</p> <p>426 O 258 Head left<br/>R 260 Incuse punch<br/>a. 0.20 Not illustrated</p> |
|---|---|





## Paros, Melos, and Naxos: Archaic and Early Classical Coinages of the Cyclades

JONATHAN H. KAGAN\*

In this review article of K. Sheedy's recent monograph, the author proposes additional theories about the island coinages, including the possibility that Parian drachms were minted in the region around Thasos and shipped to Paros.

Kenneth Sheedy's study *The Archaic and Early Classical Coinages of the Cyclades* (Royal Numismatic Society, Special Publication no. 40, 2006) has been more than twenty years in the making. It has been well worth the wait.<sup>1</sup> This is an important volume that will become a standard reference for generations. What we have is not a study of a single mint but of thirteen. One is able now in one place to view the coinage of an entire region arranged in an expert die study with a state of the art chronology. As will be discussed more fully below, it is remarkably stimulating to look at these different islands and see similar patterns in many mints (seven used the Aeginetan standard) but also real differences in the approach to coinage (Kythnos and Siphnos had fractions that worked on both the Aeginetan and Attic-Euboeic standard, while the large mint of Paros had no fractions at all) or in some cases a complete absence of coinage (e.g., Andros and perhaps Tenos). It also makes one realize that we need similar treatments for the other minting regions of the archaic and early classical period.

\* New York, NY.

1. Not only the author, but also the senior editor, Richard Ashton, should be congratulated for this well-edited and authoritative publication.

Accompanying the coins is a concise but detailed commentary on the economy and history of the respective mints. Making the text more valuable than that found in most die studies is Sheedy's great knowledge of the region and its archaeology. He has also read broadly on the later economy of the Cyclades and the anthropology of island economies in general which adds an unexpected but welcome dimension to a numismatic publication.

On a technical basis, the study is full of individual discoveries that amend the previous literature. For example: an important die-link establishes that the amphora coinage traditionally attributed to Andros is in fact an early issue of Karthaia; Holloway's attempt to view the wreath on the amphorae of Naxos as a post-Persian victory symbol must be discarded as these coins clearly pre-date this period; and Lederer's stylistic arrangement of the drachms of Paros is fully superseded.<sup>2</sup>

Sheedy demonstrates without doubt that all the frog staters attributed to Seriphos with the possible exception of the Montagu specimen in the British Museum (BM) are modern forgeries. Personally, I would reject the BM coin as well on stylistic arguments. The depiction of the frog with its front and rear legs outstretched is appropriate (and I confess I am not an expert in amphibians) to a specimen awaiting dissection not to a live animal one would expect the Greeks to depict on a coin. There are two Milesian weight drachms with frog obverses that must belong to Melos (one was found on the island and the other has an apple on the reverse) illustrated by Sheedy (pl. 20 but not catalogued) that provide exemplars of what a genuine ancient frog coin would look like. There is real spring in the legs. In place of the frog coinage, Sheedy attributes two hitherto unknown drachms with a gorgoneion obverse that were found on Kynthos to Seriphos. He may well be correct but it is stretch to jump to the conclusion that: "The issue of coinage during the archaic period is another sign that the polis was not without means." (p. 47).

Stylistically, Aegina must be viewed as the dominant influence on the coinage of the Cyclades. Some mints like Naxos and Delos used a quadripartite square rather than a mill sail but in terms of fabric and style, no one would doubt their island pedigree. The coinage of Paros begins in the Aeginetan tradition with some rare staters (only two obverse dies are known) with the mill sail reverse that are typically Cycladic. No fractions have been found to accompany this early issue but I suspect they shall turn up one day. After 515 BCE, an issue exclusively of drachms with an incuse square reverse begins. This is by far the largest issue of coinage from the Cyclades. Sheedy collected 288 coins (200 die combinations) and his die study is an important achievement. As he points out, this series is stylistically influenced by the coinage of northern Greece. The incuse, the circle of dots

2. R. R. Holloway, "The crown of Naxos," *American Numismatic Society Museum Notes* 10 (1962), 1-8; P. Lederer, *Neue Beiträge zur antiken Münzkunde* (Bern, 1943).

around the obverse design, the depiction of the goat itself (the author notes especially the similarity of O 44 to coins of certain Thracian tribes (p. 104), all relate the coinage to that used by the Parian colony Thasos and the cities of her Peraia. Paros also, as Sheedy details, had unusually close ties to her northern colony; there is an example of a shared archon c.550–525. A late sixth-century epigram from the north wall at Amphipolis mentions a Parian Tokes and the struggle of Parians for the control of Eion (p. 117).<sup>3</sup>

There is no doubt that the goat coins are Parian. We know from an epigram of Simonides (*apud* Diog. Laert. 4.45) that the goat was the symbol on coins of Paros (p. 93). A large hoard (*IGCH* 13) made exclusively of the drachms was discovered there in 1937. Having made this point, I think it is worth speculating on what it means to be Parian. Compared to the other Cycladic coinages, there are two notable differences to highlight beyond the stylistic point already made. One is the total absence of fractions. Except where we are dealing with single coins, all the other mints identified by Sheedy have fractions. The second point is that the weights are extraordinarily consistent and close to standard. Sheedy, who views Cycladic coinage as a tool of the state for making payments, would probably not be troubled by the first point in that it might reflect the greater relative wealth of Paros given her interests in Thrace and role in the marble trade. The second point could be accounted for by the preponderance of known specimens from the Paros 1937 hoard and the Decadrachm hoard (*CH* 8.48). I am still troubled by these anomalies and would like to suggest the following hypothesis that can be tested by metal analysis. It is my suspicion that the Parian drachms were minted in the region around Thasos and were shipped to Paros. They should be seen as a form of payment—e.g., tribute, tax, royalties etc.—sent by the silver-rich colonies to the mother city. This would explain all three anomalies—style, weight and lack of fractions. As a form of payment, the Parians would have expected the weight to be consistent; when striking one's own coinage there is a temptation to keep it light in order to prevent it from being removed from circulation as well as to eke out a profit margin. One would expect a payment in a single denomination, hence no fractions, and the style would have by definition been local to the region of Thasos where the coins would have been struck. In the *Price Festschrift* I suggested an example of a mother city striking coinage for its colony (in that case Corinth for Epidamnus<sup>4</sup>); here we may have the reverse, a colony striking coins for its mother.

3. For the epigram see D. I. Lazarides, "Epigramma Parion apo ten Amphipolin," *Archaiologike Ephemeis* (1976), 164–181. See now also S. Psoma, "The 'Lete' Coinage Reconsidered," in P. van Alfen, ed. *Agoranomia: studies in money and exchange presented to John H. Kroll* (New York: American Numismatic Society, 2006), pp. 77f.

4. J. Kagan, "Epidamnus or Ephyre (Elea): a note on the coinage of Corinth and her colonies at the outbreak of the Peloponnesian War," in R. Ashton et al., eds., *Studies in Greek*

This could also help explain the end of the coinage of Paros. Sheedy's last grouping Class H is dominated by coins from the Decadrachm hoard (*CH* 8.48). (As an aside, I do not see how one can identify the dies of 199 and 200 from the Asyut Hoard as being part of this Class; as Sheedy admits, they are nearly totally obliterated). I would date this group slightly later than Sheedy's 470 end date to c. 465 near the close of the Decadrachm hoard. This would allow us to tie the end of the coinage of Paros to the revolt of Thasos (465–63) from Athens, which ended with the loss of the island's mining interests on the Thracian mainland. The suppression of this revolt seems to have resulted in a significant break in the coinage of Thasos.<sup>5</sup>

Interestingly, there is a large find of only Aeginetan coins (600+) from Paros c.460, the Eirini Hoard (*CH* 2.24; p.129). This deposit shows among other things the continuing importance of Aeginetan coins in the Cyclades. The 33 illustrated coins are certainly quite worn and many were minted considerably earlier than their deposit date. While it is possible that the coins only arrived on Paros after the mint closed, it is also possible that they were accumulated on the island over a period of time. If the latter is correct, then we have intriguing evidence for a lack of a mint on the island in that the owner clearly did not choose to have the turtles reissued as Parian goats.

The end of the Paros mint also coincides with the cessation of coinage in the Cyclades with the exception of Melos (Siphnos may have continued a few more years to 460/455). Sheedy rejects any connection between this and Athenian economic policy.<sup>6</sup> Instead, the demise is attributed to the travails of the Persian wars and the closure of trade routes; the demands for resources by the Delian League may also have led to a lack of bullion and a reduction in state expenditure. These no doubt are important factors, but do not, to my mind, fully explain the anomaly of Melos. For one thing, there is hoard evidence that trade routes reopened after mid-century with the Persian Empire (we find Melian coins of the 440s in the Persian Malayer hoard [*IGCH* 1790] p.149), but no Cycladic mint chose to reopen. I think it is impossible not to draw a connection (at least in some cases) between membership in the League and the abandonment of local coinage. I have a more nuanced view of the purpose of early coinage and especially the role of fractions than that held by Sheedy who feels that "coinage was not necessary for trade at any level" (p.134). For states without bullion such as the cities on Keos or Delos, I think fractions played a role in monetizing the local marketplace and the act

*numismatics in memory of Martin Jessop Price* (London: Spink, 1998), pp. 163–73; see especially p. 168.

5. See O. Picard, in Y. Grandjean and Fr. Salviat, *Guide de Thasos* (Athens, 2000), pp. 304–6.

6. See p.125 for his arguments contra T. Figueira's 1998 thesis in *The power of money: coinage and politics in the Athenian empire* (Philadelphia: University of Pennsylvania Press).

of conversion of foreign currency and bullion provided some of the feedstock.<sup>7</sup> As Sheedy discovered, the mints of Siphnos, Kynthos and maybe Seriphos, if it struck the gorgoneion coins, issued fractions on a weight standard to facilitate the conversion into either Attic or Aeginetan weight coins. This is why fractions were present from the beginning at most of the *poleis* that chose to strike coins, and the role of fractions (even if initially made for state payments) was to facilitate commercial transactions. If one accepts this model, then one can see that it would have been practically impossible to restrict the use of Athenian currency in the agora under the League and that it would quickly follow that both the convenience and profitability of local currency would falter (unless, of course, a state had access to mines). (One might usefully compare some of the island economies of the Caribbean and their relation to the U.S. dollar). This would not have required a pro-active decree to stop local coinage but at the same time it is not unrelated to questions of economic sovereignty. It is in these terms that Melos is best understood. Could it not be that absence of membership made it possible for Melos to control the use of coinage in her marketplace keeping minting a profitable enterprise and to create a real differentiation from her neighbors? This differentiation in its totality—not just the coinage of course—did not, as we know, go unpunished. The absence of Athenian coin finds from the islands or for that matter in other parts of the Empire during this period is not a dispositive counter argument (p.125). The stability of the Athenian hegemony in this period was not conducive to abandoned coin hoards.

It also might be worthwhile to speculate on the influence of Athens on another of the Cycladic mints Sheedy cataloged—Naxos. Sheedy maintains the traditional end date of 490 for the mint, which coincides with the island's sack by the Median admiral Datis. Past scholars of the nineteenth and early twentieth century were comfortable with this because they were generally working with a higher chronology whereby coinage at Naxos started closer to 575 BCE rather than the 540/530 date Sheedy sensibly proposes. More recent scholars like the authors of the *Asyut Hoard* could rely on Ross Holloway's work that Sheedy has overturned.<sup>8</sup> The wreathed staters have an early terminus ante quem based on hoard evidence, but once we see that they are the first coins of Naxos not the last, it becomes less clear how to date the end of the mint. The unwreathed series was one of the important coinages of the late archaic period. Sheedy records 58 examples from 32 obverse and 41 reverse dies. There are 44 die combinations making it impossible to order

7. See J. H. Kagan, "Small change and the beginning of coinage at Abdera," in P. van Alfen, ed. *Agoranomia: studies in money and exchange presented to John H. Kroll* (New York: American Numismatic Society 2006), pp. 49–60.

8. M. Price and N. Waggoner, *Archaic Greek coinage: the Asyut hoard* (London: V. C. Vecchi, 1975).

the series through die linkage. Statistics provide only the most rudimentary guide to calculating just how large this issue was; we are clearly missing many dies. We know that the coinage begins before the end of the sixth century because of specimens in the Demanhur (*IGCH* 1637), Mit Rahineh (*IGCH* 1636) and Santorini (*IGCH* 7) hoards. Coins of Naxos not die-linked to these finds are also to be found in fifth-century hoards like Benha el Asl (*IGCH* 1640)(24), Antilebanon (*CH* 6.4)(30), Malayer (*IGCH* 1790)(55) and most importantly Asyut (*IGCH* 1644)(33–35). The Asyut coins while subjected to test cuts appear in good condition. The absence of any Naxian staters from the Decadrachm hoard (*CH* 8.48) is unlikely to be accidental if the mint were still active c. 465–462; this provides our most reliable *terminus ante quem* for the cessation of the mint. That Naxian coins are found in hoards of the 470s does not, of course, prove that they were still being minted at that time. One has to make a key but as of today unprovable assumption concerning the pace at which the Naxian coins were minted. Sheedy's early date for the end of the mint is consistent with his view of a strong Cycladic economy down to the end of the sixth century; I, however, believe that an examination of the coinage freed of any preconceived framework could equally suggest a c. 470 end of the mint rather than c. 490. This is indeed the conclusion reached by Nicolet-Pierre in her 1997 study of the archaic Naxian coinage, which contains a full analysis of the hoard evidence summarized above.<sup>9</sup>

It remains to be seen if the historical record allows this suggestion. (Nicolet-Pierre extensively collects the literary evidence for Naxos in the opening decades of the fifth century and provides full bibliography. My summary and conclusions largely parallel hers). In 499, the Naxians withstood a four-month siege by the Persians. Ten years later, the Persians returned and had greater success. The city was sacked and some Naxians were captured, according to Herodotus (VI.96). Crucially, most of the Naxians had retreated from the city in advance of the attack and presumably took their portable wealth with them. Plutarch, who had access to local Naxian annalists, implies that the Naxians drove off Datis and that despite the loss of the city, it was not a rout (*Moralia* 869). Whatever the exact facts, the expedition of Datis was not a happy event for Naxos, but there is no reason why coinage could not have resumed without visible break in the series. There is no evidence for Persian occupation between 490 and 480 and, by the Battle of Salamis, the Naxians were able to contribute a contingent of up to six ships.<sup>10</sup> If a

9. H. Nicolet-Pierre, "Naxos (Cyclades) archaïque: monnaie et histoire. La frappe des 'cantares', de fin du Vie siècle à c. 470 av. J.C." *QT XVI* (1997), pp. 63–121.

10. Herodotus records only four; Plutarch citing Herodotus's contemporary Hellanicus has the higher number and reports some additional details giving him credibility. He quotes an epigram of Simonides hailing the valor of the Naxian commander Democritus who was third to attack and captured five enemy ships and freed a captured Greek vessel as well.

known event ended the production at the mint, the best candidate would be the Athenian suppression of the Naxian revolt, the first secession by a member of the Delian League. Thucydides (1.98.4) is our source for this. Unfortunately he does not state the cause of the revolt or date it more specifically than between 476 and 465. What he does say (in Hornblower's translation) is that Naxos "was deprived of its freedom contrary to Greek custom."<sup>11</sup> Closing the mint seems to me to be consistent with such an outcome and I would go further to argue that the coins support a date closer to 470 than 465 for the revolt, providing an important piece of evidence for the orthodox early chronology of the Pentakontaetia.<sup>12</sup> At the risk of sounding completely circular, the very fact that the Naxians could attempt a revolt is in some sense indicative of a degree of prosperity consistent with the proposed coinage.<sup>13</sup> One should always be cautious in tying the rhythms of monetary production to political events. In both the cases of Naxos and Paros, however, it is startling how the coinage just stops suddenly. There is no sense of a slow decay (as we see at Siphnos where there seems to be a shift to fractional coinage) or any gradual reduction in weights or quality.

The alternative theories that I raised above should not be viewed as criticisms of this book nor in any sense as corrections. Instead, they should be seen as a tribute to the thought provoking nature of the volume. Having so much material clearly and painstakingly assembled is a treat for sore eyes. Sadly, it makes it all too obvious that we desperately need this type of effort not just for the Cyclades but the rest of the coining regions of the Greek world if we are going to enable non-numismatists to take advantage of the progress in chronology and research made during the last fifty years. At minimum, new editions of Babelon's *Traité*, and Kraay's handbook are required.<sup>14</sup>

11. παρὰ τὸ καθεστηκὸς ἐδουλώθη (more literally: "contrary to what was established").

12. See *Cambridge Ancient History* 2nd ed., vol. 5, p.46.

13. Cf. Nicolet-Pierre, *op cit.*, p. 110.

14. E. Babelon, *Traité des monnaies grecques et romaines* (Paris: E. Leroux, 1901-1932), 4 vols.; C. M. Kraay, *Archaic and classical Greek coins* (Berkeley: University of California Press, 1976).





## Torremuzza's SEGESTANORVM

PLATES 37–40

SILVIA MANI HURTER\*

The author attempts to link Segestan coins, especially those with long pedigrees, to the drawings in Torremuzza's eighteenth-century volume.

All through the twentieth century, the coinage of Segesta was rather neglected. When the first *corpora* of Sicilian coins were compiled, the numismatists of the time concentrated on the admittedly wonderful coinage of the Greek cities of the island, while the Segestans were considered half-barbarian and perhaps just ugly. This, however, was not the case in the late eighteenth and in the nineteenth centuries.

Among the first books on ancient coins published in the early days of numismatics was the monumental work of Count Torremuzza (Gabriele L. Castellus, prince of Torremuzza), *Siciliae populorum et urbium regum quoque et tyrannorum veteres nummi Saracenorum epocham antecedents*, which came out in Palermo in 1781, with a supplement published in 1789 and second in 1791. It dealt lavishly with coins of Segesta, mostly with didrachms; on plate 63, nine didrachms, two drachmas (?), and eight fractions are illustrated.

However, Torremuzza was not the first author to publish Sicilian coins. In 1764, there appeared in Amsterdam Petrus Burmannus Secundus's *Jacobi Philippi d'Orville. Sicula*, with one plate of Segestan didrachms. It is evident that Burmann's

\* Brandschenkestrasse 82, CH 8002 Zurich, Switzerland.

draughtsman worked with coins of the d'Orville collection, now in Glasgow, and with some of Payne Knight. The three d'Orville specimens, a tetradrachm and two didrachms, are easily identifiable, while the rest is rather fanciful. And it is on these illustrations that the ones in Torremuzza are based. It is a pity that this draughtsman did not have the slightest feeling for style, with the result that an identification of the model largely depends on the symbols. Among other things, he did not see that the heads of nos. 5 and 7 are from the same die. He just copied, more or less closely, the drawings from the Burrmann publication. In any event, the models must have been available, probably in London, in the second half of the eighteenth century.

This article tries to identify the actual models or to match Segestan coins, if possible specimens with long pedigrees, with the drawings in Torremuzza's work. The die numbers are those in the present author's monograph *Die Didrachmenprägung von Segesta* (2008).

### DIDRACHMS

(Pls. 37–38)

Published in Torremuzza's main volume, plate 63

- 1 / T 1    *Obv.* 59 or 60 / *Rev.* 107 (?)  
           1A Cambridge, SNG Leake and General 1144, ex Sotheby 1844 (Thomas), 497  
           The rev. is probably 107, though the ethnic is missing
  
- 2 / T 2    *Obv.* 61 / *Rev.* 110  
           2A BM, BMC 38, Payne Knight p. 246, B 10.  
           Here the draughtsman mistook a die-break on the dog's back and turned it into a goat's head, in the manner of the staters of Sikyon with the chimæra. The rev. die was also used for tetradrachms.
  
- 3 / T 3    *Obv.* 60 / *Rev.* 109  
           3A Sotheby's New York 1991 (Hunt IV), 83 ex coll. Gillet 511 and ex Hirsch 31, 1912, 192  
           The coin illustrated in Torremuzza was published in 1774 in a *Catalogue raisonné d'une collection de Médailles*, p. 47.
  
- 4 / T 4    *Obv.* 31 / *Rev.* 56  
           4A Private coll., ex LHS 100, 2007, 166.  
           This could be the actual model; a handwritten note from a previous owner stated that the specimen came from Pennisi and Torremuzza. The draughtsman mistook the palm frond above the dog for an ear of corn.

- 5 / T 5 *Obv.* 24 / *Rev.* 38  
5A BM = Lloyd 1167 ex Schlessinger 13, 1935 (Hermitage), 310
- 6 / T 6 *Obv.* 15 / *Rev.* 27  
6A Glasgow, MacDonald 1 ex coll. Duane
- 7 / T 7 *Obv.* 21 / *Rev.* 38  
7A BM, Inv. 1848-8-19-36, probably ex coll. Duane  
The heads of nos. 5 and 7 are from the same die.
- 8 / T 8 *Obv.* 54 / *Rev.* 100  
8A Glasgow, MacDonald 19 ex coll. Duane  
This coin is actually illustrated in Torremuzza and in Kinch, *Zeitschrift für Numismatik* 16 (1888): 199.
- 9 / T 9 *Obv.* 51 / *Rev.* 94  
9A BM, Payne Knight p. 246.B 14  
This illustration is a rather free adaption of Burrmann's pl. 11, third row right, which clearly reproduces the Payne Knight specimen, including the die-break behind the small head above the dog and the off-center striking.

## DRACHMS (?)

(Pls. 38–39)

T 10 cannot be identified

- 10 / T 11 *Obv.* 56 / *Rev.* 103  
10A BM, BMC 35; Payne Knight p. 246. C 1  
Surely a didrachm; the symbols are unmistakable.  
Here we are faced with an error by the draughtsman (?): Segesta did not strike drachms of the type of the didrachms. The error was later repeated in Kinch, *Zeitschrift für Numismatik* 16 (1888): 194. Torremuzza unfortunately does not indicate any weights, but didrachms, even when struck on a narrow flan, can hardly be mistaken for drachms.

Published in *Auctarium*, pl. 6 (1789)

- 11 / 1 *Obv.* 57 / *Rev.* 104  
11A Neapel, Santangelo 8295. The Neapel coin that was formerly in the collection of Antonio Astuto is clearly the model.

12 / 2 *Obv.* 15 / *Rev.* 29

12A Glasgow, MacDonald 21

Published in *Auctarium secundum* (1791)13 / n.n *Obv.* 6 / *Rev.* 19

13A Copenhagen, SNG 571; the Copenhagen coin is clearly the model.

The rev. die is one of three with the enigmatic ethnic ΣΕΓΕΣΤΑΖΙΒΕΜ, about which Torremuzza made the delightful comment “qui de hisce literis explicationem expectet, Sybillam adeat, aut hariolum.”

In both *Auctarium* volumes Torremuzza either employed another draughtsman or his old artists got better. Now the coins can be identified.

## TETRADRACHMS

(Pl. 39)

Published in Torremuzza's main volume, plate 72

14 / 1 14A Berlin (FS 2592)

Torremuzza wrote “Nummus est maxime raritatis.” The model for this tetradrachm cannot be made out. Here the draughtsman embellished heavily and several things are seriously wrong: the driver, here a nude youth, is female and is wearing a long chiton; in the exergue, below the ethnic, there is a grasshopper and not a fish. The huntsman is holding a branch instead of two spears, the pilos behind his head is omitted, and so is the herm to the right.

15 / 2 15A London, inv. 1872-7-9-26 ex Northwick 319.

Close to the model; the huntsman is still holding a branch instead of two spears but the pilos and the herm are there. The Greek ethnic ΕΓΕΣΤΑΙΩΝ behind the huntsman is missing.

16 / 3 16A Berlin (FS 2593)

Possibly the model. The ethnic, almost obliterated on most of the existing specimens, is rendered in bold letters, mistakenly with an initial sigma. Though from the same obv. die as the previous coin, the huntsman is definitely fatter. The rev. die was engraved for didrachms.

17 / 4 From the collection of Barone Longo, Messina. A total mystery! We might follow Torremuzza's advice and turn to the Sybil or the soothsayers.

## FRACTIONS

(Pl. 40)

Published in Torremuzza's main volume, plate 73

T 12–14 cannot be identified

18 / T 15	Litra 18A London, BMC 11; Payne Knight
19 / T 16	Litra 19A Palermo, Inv. 42450
20 / T 17	Litra 20A Berlin, JF 6359
21 / T 18	Hemilitron 21A Private collection
22 / T 19	Litra 22A New York, SNG ANS 654 ex coll. Jameson 715

By the end of the eighteenth and during the nineteenth century, drawings of coins got better and better, and the books were no longer written in Latin. This progress does in no way reflect on Torremuzza's merits. His publications are a milestone in the research of Sicilian numismatics and, after more than two centuries, are still of great use to the present-day student. His collection also merited the praise of his contemporaries: when Goethe was taken to see Torremuzza's cabinet, he rhapsodised over the fresh beauty of the coins, as compared to the dusty ruins of the countryside: "... lacht uns ein unendlicher Frühling von Blüten und Früchten."<sup>1</sup>

1. *Italienische Reise* 2: 12 (April 1787).



## Thessalian Hoards and the Coinage of Larissa

PLATES 41–46\*

CATHARINE C. LORBER\*\*

Thessalian coin hoards recorded over the last twenty years clarify the development of the coinage of Larissa. They also help to define the relative chronology of Thessalian monetary *koina* of the fifth century BC. The paper includes a die study of Larissa's bull wrestler hemidrachms of the mid-fifth century.

More than eighty years ago Fritz Herrmann produced an excellent overview of the silver coinage of Larissa, which he classified into eight groups (Herrmann 1925).<sup>1</sup> Herrmann believed that his first two groups were struck on the Persic weight standard and were therefore datable to the period of Persian occupation, c. 500–479 BC. Group I comprises a small coinage of drachms and obols with a sandal reverse (Herrmann 1935: 3–9, pl. i, 1–5). A hemidrachm with the sandal reverse is classed separately as Group Ia, because Herrmann recognized its weight standard as reduced Aeginetic, requiring a date after 479 (Herrmann 1925: 9, pl. i, 6). Group II represents another scarce coinage of trihemiohols and obols. The former feature a horseman on the obverse and an enthroned deity on the reverse. The latter

\* Most of the illustration on the plates were provided by a generous friend of numismatics. The author also wishes to thank the two referees whose comments identified many weaknesses in the original draft of this paper.

\*\*catharine.lorber@hotmail.com

1. Herrmann's survey covered all silver denominations, but the present report treats only hemidrachms, drachms, and staters, because trihemiohols and obols were not represented in significant numbers in the group of hoards studied. These small denominations will be the subject of a die study by Elizabeth Pendleton.



pair a horse obverse with reverses depicting the nymph Larissa in various poses (Herrmann 1925: 9–18, pl. i, 7–17).

Herrmann's Group III encompasses the important body of coinage depicting or alluding to the *taurokathapsia*, the bull wrestling competition at the Taureia, the Thessalian national games in honor of Poseidon. These coins include drachms, hemidrachms, trihemibols, and obols of Aeginetic weight. Their stylistic evolution and iconographic variation led Herrmann to divide them into twelve subgroups, III A through III L. He used art historical comparisons to situate them between 479 and the end of the fifth century (Herrmann 1925: 18–36, pl. i, 18–25, pl. ii–iii, pl. iv, 1–3). Toward the end of Group III, the drachms of III J and III K transition from square to round reverse dies. Associated with the latter is a redesign of the bridled horse reverse type, from a leaping posture to a galloping or cantering gait.

Group IV includes drachms and a hemidrachm with a profile head of the nymph Larissa on the obverse. Group IV drachms, like those of Groups III J and III K, span the transition from square to round dies. Herrmann even identified a reverse die link between Groups III J and IV. Consequently he envisioned a concurrent production of Group III H–III K and Group IV from c. 420, first involving three anvils, then two, with Groups IVb–c continuing in production to c. 395 (Herrmann 1925: 36–39, pl. iv, 4–15).

The next major coinage of Larissa is Herrmann's Group VII, comprising all silver pieces with a facing head of the nymph Larissa, including didrachms, drachms, and occasional fractions. The facing head coinage, like the bull wrestler coinage, exhibits considerable variation in style and iconographic detail and Herrmann subdivided it into eighteen series (Series A through R). Believing that the Larissa mint had imitated Cimon's facing head of Arethusa on Syracusan tetradrachms, he placed the most faithful "copies" in Series VII A, dated c. 395, and followed a presumed stylistic decline to heads bearing scant resemblance to the supposed prototype. Series VII R consists of drachms bearing the personal name *Simo*. Herrmann associated these coins with the local tyrant Simos, who controlled Larissa between 353 and 344/3. Philip of Macedon deposed him in the latter year to assume personal control of Thessaly, and for Herrmann that event marked the end of Larissa's silver coinage (Herrmann 1925: 41–63, pl. v–vi, pl. vii, 1–10 and 12–17, pl. viii).

Herrmann's three remaining groups represent small and isolated drachm emissions. Group V is the drachm issue with a profile head of Larissa in the style of Euaenetus, dated c. 395 by Herrmann (Herrmann 1925: 39–40, pl. iv, 16). Group VI features the types bull/horseman, also dated to the beginning of the fourth century (Herrmann 1925: 40, pl. iv, 17–18). Group VIII is the issue of drachms with the facing head of Aleuas, mythical founder of the Aleuad family, and an eagle on thunderbolt reverse. Herrmann dated this emission 363–361 on stylistic grounds

and associated its patriotic types with the struggle against Alexander of Pherae (Herrmann 1925: 63–66, pl. vii, 11).

On the basis of hoard analyses, Thomas R. Martin overturned Herrmann's relative chronology for the facing head coinage of Larissa (Martin 1983). Martin reclassified the facing head coins into early, middle, and late groups according to their relative condition in hoards. The new classification showed that Herrmann had erred in deriving Larissa's facing heads from Cimon; rather, it implied that local artists had developed their own conceptions of the divine facing head, which evolved over time into a standardized image that somewhat resembled the Syracusan masterpiece.

The present author has proposed slight changes to Martin's classification on the basis of hoards recorded since the 1980s (Lorber 1992; Lorber 2000). These chronologically overlapping hoards confirm much of the rest of Herrmann's arrangement of the coinage of Larissa, but nevertheless allow for refinements. They also usefully supplement the hoard record assembled by Martin, which appeared to show that coins of Pharsalus rarely occurred in hoards with coins of Larissa, leading to the conclusion that Thessalian civic coinages tended to circulate in their own local regions (Martin 1985: 41–59).

The following hoards form the basis of the overview offered below:

Near Larissa, Greece, 1984 (*CH* 8, 137)

Unknown findspot, 1988 (*CH* 9, 67)

Thessaly, 1988/1989 (*CH* 8, 193)

Unknown findspot, 1989 (*CH* 9, 65)

Unknown findspot, 1989 (*CH* 9, 78)

Unknown findspot, 1989 (*CH* 9, 121)

Thessaly, early 1993 (*CH* 9, 64)

Unknown findspot, 1994 (*CH* 9, 79)

Thessaly, c. 1996 (*CH* 9, 77)

Thessaly, c. 1996 (*CH* 9, 87)

Commerce, 2007

Only two of these hoards have been published in full, *CH* 8, 137 and *CH* 9, 87 (Wartenberg, Price, and McGregor 1994: pl. xi, 21–24, pl. xii, 1–31, and pl. xiii, 1–25; Lorber 2000). In addition, the facing head Larissa drachms of *CH* 8, 193 were fully illustrated, and those of *CH* 9, 65 became the basis of a provisional die study of the early facing head drachms (Wartenberg, Price, and McGregor 1994: pl. xxvi, 12–26 and pl. xxvii, 1–6; Lorber 1992).

Several of these hoards are large to very large mixed hoards containing coins struck over a period of fifty years or even more (*CH* 9, 65, 67, 77, perhaps 121). The most heavily worn coins in these hoards are Pharsalus hemidrachms with snakes on Athena's helmet, represented in Commerce, 2007, and *CH* 9, 65, 67, and

77 (Lavva 2001: A.I.1; Pl. 41, 1); the horse forepart/grain kernel types of the Thessalian *koinon* and of Scotussa, represented only in CH 9, 67 (Pl. 41, 2–4); Larissa trihemioobols and obols of Herrmann's Group II, represented in Commerce, 2007 (Herrmann 1925: pl. i, 7–17; here Pl. 41, 5–6); and Larissa bull wrestler drachms and hemidrachms of Herrmann's Groups III A and III B, showing the horse with strictly parallel legs, represented in Commerce, 2007, and CH 9, 67 (Herrmann 1925: pl. i, 18, 21, 23; here Pl. 41, 7–13).

Scholars have proposed similar absolute dates for three of these apparently contemporary coinages, on grounds of style and/or historical probability. Stella Lavva dated her small Pharsalus Series A.I.1 to the period 479–457 BC, fixing the lower *terminus* at the fall of the Echekratid dynasty (Lavva 2001: 42–44, 108). In his review of Lavva's Pharsalus monograph Wolfgang Fischer-Bossert expressed his preference for a date around 460 for this earliest Pharsalian issue (Fischer-Bossert 2003: 400). Peter Robert Franke proposed a date within the range of c. 470–460/50 for the coinage of the Thessalian *koinon* and the similar types signed by Scotussa and Methylum (Franke 1970: 91–93). Herrmann bracketed his Larissa Groups III A and III B within the years 479–465, but stated that his sense of style placed these coins in the mid-460s (Herrmann 1925: 25–26). Jonathan Kagan demonstrated that Herrmann's Groups I and II were not struck on the Persic standard, demolishing one of the chronological fixed points on which the German scholar had relied. After offering iconographic arguments to place the end of Herrmann's Group I about 460, Kagan suggested that the introduction of bull wrestler types coincided with the Thessalian alliance with Athens in 462/1 (Kagan 2004). There is thus a fair scholarly consensus for a date around 460 for the earliest hemidrachms of Pharsalus, the coinage of the Thessalian *koinon*, and the earliest bull wrestler drachms and hemidrachms of Larissa.

Katerini Liampi discussed the evidence for two Thessalian *koina* (Liampi 1996). The first is attested by drachms, hemidrachms, obols, and hemioobols with types alluding to the *taurokathapsia*, issued by Larissa, Crannon, Pherae, Scotussa, Pharcadon, Tricca, Pelinna, and the Perrhaebi. The second *koinon* is that involving the Thessalians, Scotussa, and Methylum. Liampi dated the first of these *koina* after 479 to shortly after 460, and the second after 460 to c. 450. Her relative chronology, however, is inconsistent with the wear patterns of CH 9, 67, as we shall see below.

Generally less worn in our hoards, but still clearly circulated, are bull wrestler hemidrachms of Tricca, Pharcadon, and Larissa, the latter showing the horse with forelegs not strictly parallel and usually distinguished by brief obverse inscriptions (Babelon 1932: pl. ccxci, 9–17, pl. ccxcii, 10–11, pl. ccxcvi, 4; Herrmann 1925: Groups III D and III E, pl. ii, 6, 8–11; here Pls. 41–42, 14–40). The Larissa hemidrachms span the epigraphic transitions from legged to legless *rho* and from three bar to four

bar *sigma*.<sup>2</sup> The hemidrachms of Tricca and Pharcadon are epigraphically more advanced, but comparable in wear (Pl. 41, 14–16). The hoard contents and preliminary die study suggest that Tricca was the most prolific of these hemidrachm mints.

CH 9, 65 and 67 contained enough Larissa hemidrachms with obverse control letters to allow the construction of four die sequences that account for most or all of the mid-century hemidrachm varieties. See Appendix 1, which also includes specimens from three additional hoards (CH 8, 137, CH 9, 77, and Commerce, 2007).

Series 1.  $\text{I}\text{P}$  and a die-linked variety without letters (Herrmann 1925: Group III E, cf. pl. ii, 8; here Pl. 41, 17–20)

Series 2.  $\text{X}\text{O}$ ,  $\text{O}\text{X}$ , and  $\text{X}\text{O}$  (Herrmann 1925: Group III E, cf. pl. ii, 10, 11; here Pls. 41–42, 21–25)

Series 3.  $\text{Y}\text{P}$  and a die-linked variety without letters<sup>3</sup> (Pl. 42, 26–28)

Series 4.  $\text{O}\text{P}$  and  $\text{T}\text{O}$  (Herrmann 1925: Groups III D and E, cf. pl. ii, 6, 9; here Pl. 42, 29–38)

The proposed order of these four groups rests on the condition of hoard coins, epigraphic development, and the evolution of fabric. In the hoards, hemidrachms of Series 1 are consistently the most worn of the varieties with control letters, and roughly comparable in condition to drachms and hemidrachms of Herrmann's Groups III A and III B. Coins of Series 3 and 4 are fresher than those of Series 2. The epigraphic transition involves Series 1 and 2, where archaic and modern letter forms are used indiscriminately. Series 1 consistently uses legged *rho* but *sigma*, in its only appearance, is four bar. Series 2 displays both forms of *sigma* on its obverse dies, and its reverse dies tend to associate legged *rho* with four bar *sigma* and legless *rho* with three bar *sigma*. Series 3 has only the modern letter forms, but it is linked to Series 1 and 2 by fabric, specifically by reverses that feature a clearly defined incuse square within a flat field, at least parts of which are visible on some specimens. In contrast, Series 4 reverse types are recessed in more loosely conceived squares with rounded corners and (sometimes) curving sides; the areas outside the recess do not appear to have been flattened. These observations can be confirmed by measurements: For Series 1 the incuse square is 11 x 11 mm, for Series 2 and 3 it is usually 12 x 12 mm, while for Series 4 the recess appears to

2. Ernest Babelon introduced confusion by dating these epigraphic transitions around 470, but listing hemidrachms with early letter forms under a rubric that dates them between 430 and 400 (Babelon 1932: col. 374).

3. The letters  $\text{Y}\text{P}$  are always rather eroded and it is possible that an attempt was made to erase them from the die. The hypothesis of erasure is perhaps supported by the lack of smaller fractions with this inscription, whereas there are inscribed trihemiobols and obols corresponding to the other three hemidrachm series. My thanks to Elizabeth Pendleton for this suggestion and the supporting information.

measure 13 x 13 mm (though opposite sides of the recess are rarely visible on the same coin).

These four hemidrachm series use two obverse designs almost exclusively, one with the bull type oriented to the right, the other with the bull type oriented to the left. Both echo the types of the earliest bull wrestler drachms (Pl. 41, 7–11). In the right-facing version the hero throws his weight back in an effort to slow the on-rushing bull. In the left-facing version he leans forward as he strides alongside the animal. On the hemidrachms, the two types also differ in certain artistic details. The right-facing hero is rather dumpy, with a thick rounded hat, arguably a *petasus* rather than a *kausia* (Kagan 2004: 81). The left-facing hero is slightly more graceful, though still endowed with protruding buttocks and powerful thighs, and his *kausia* has a tiny crown and wide brim. These stylistic features suggest that hemidrachms with the right-facing obverse should be earlier than the others, in which case Series 3 should precede Series 4. But if we can attribute the subtle contrasts in style to two artists, it is possible to retain the sequence based on fabric.

Because the hemidrachms and drachms drew on the same repertory of compositions for their obverse types, Herrmann relied on the posture of the bull wrestler as the basis of his classification, ignoring control letters. Thus drachms with the control letters  $\tau\omicron$  (Pl. 42, 41–42) are associated with unmarked hemidrachms in Herrmann Group III C, while hemidrachms marked with  $\tau\omicron$  and other control letters are associated with unmarked drachms in Herrmann Groups III D and III E (Pls. 42–43, 43, 55). Herrmann's arrangement also yields epigraphic inconsistencies, because it associates hemidrachms of our Series 1 and 2, which use archaic and modern letter forms indiscriminately, with drachms that consistently employ more modern forms. It is more satisfactory to associate the hemidrachms marked  $\tau\omicron$  with the control-linked drachms of Herrmann's Group III C.

Not too long after the revival of drachm production, the hemidrachm denomination fell out of favor and ceased to be minted on a regular basis. The only hemidrachms that correspond to the drachms of high classical style are rare examples with a small plant on the obverse (Appendix 1, Series 6; Pl. 42, 40). Except for the few early pieces in *CH* 9, 67 and Commerce, 2007, the Larissa bull wrestler drachms in our hoards consistently use the letter forms  $\rho$  and  $\xi$ , making them later than the two sequences of hemidrachms that employ the archaic and modern forms of these letters indiscriminately. The wear patterns of the different hoard components are consistent with stylistic and epigraphic evidence suggesting a suspension of drachm production in the mid-fifth century, while the minting of hemidrachms continued. Production of drachms resumed with Herrmann Group III C, marked with the control letters  $\tau\omicron$  (Pl. 42, 41–42). Herrmann considered his Groups III C, D, and E to be closely related, almost a single series, datable from 465 to shortly after 447 (Herrmann 1925: 26–28). Our hoard evidence pointing to a gap in drachm production is a clue that only the lower part of this range is plausible. And of course the lower *terminus*, derived from art historical comparisons,

cannot be considered firm. Based on wear comparisons, the  $\tau\omicron$  drachms are perhaps a decade younger than the  $\mu\alpha$  hemidrachms, implying a date in the range c. 450–440 for the beginning of the major phase of bull wrestler drachms. The revival of the drachm denomination was associated with a dramatic increase in output. It was no doubt this rapid growth in monetary supply that, after the passage of a few years, enabled some Thessalians to begin and maintain the formation of large savings hoards. A selection from the many varieties of the revived bull wrestler drachm coinage is illustrated on Pls. 42–43, 41–60.

As Herrmann noted, the interchangeable use of square and round dies is a feature of the late bull wrestler drachms and also of the profile head drachms of his Group IV (Herrmann 1925: 37). These profile head drachms are represented in CH 9, 64, 65, 67, and 77, and in CH 8, 137 (Pl. 43, 61–66). One such coin is the most worn of the illustrated Larissa drachms from the Zarkon(?) hoard (IGCH 52), which otherwise comprised early and middle facing head varieties (Varoucha 1964: 8–9, pl. 1, no. 13; cf. Appendix 2). The profile head drachms of Herrmann's Group V (Pl. 45, 100), represented in CH 8, 137 and in CH 9, 77, were struck from round dies only and probably belong to a later period.

Herrmann's only major error lay in his arrangement of the facing head drachms of his Group VII, as was first signaled by Martin 1983. Martin's classification of this material into early, middle, and late varieties, based on wear comparisons in his hoards, is confirmed by the overlapping pattern of the more recent hoards, though there are a few differences in detail.

Type	Commerce 2007	CH 9, 64	CH 9, 65	CH 8, 137	CH 9, 67	CH 9, 77	CH 9, 79	CH 9, 87	CH 9, 78	CH 8, 193	CH 9, 121
Bull wrestler hemidrachms	16		88	5	21	8					[13']
Bull wrestler drachms	131	2	255	5	147	88					[40*]
Profile head drachms	8	3	26	2	28	11					
Early facing head drachms	7	28	308	20	38	121	124		52	5	1
Aleuas facing head drachms					3						
Middle facing head drachms					3	3	14	16	14	2	
Euainetus profile head drachms				1		10					
Bull/horseman drachms						7					1–3
Late facing head drachms			[44**]			7 L-I***	16 L-I	47 to L-III	147 to L-IV	14 to L-IV	418 to L-IV
Staters								5			44

\* Perhaps intrusive.

\*\* Probably intrusive.

\*\*\* Phases outlined in Lorber (2000).

Early facing head drachms as defined by these hoards correspond to Herrmann's Group VII, Series I–K and M–R (Pls. 44–45, 67–93).<sup>4</sup> They occur in all but one of the above hoards, and also in the large hoards from Zarkon(?) (*IGCH* 52) and Atrax (*IGCH* 58 = *CH* 4, 21 = *CH* 5, 20) (Varoucha 1964: pl. 1, nos. 19–20; Oeconomides 1969: 107, nos. 20–24). Early facing head drachms are the closing coins of Commerce 2007 and of *CH* 9, 64 and 65. They are the opening coins of *CH* 9, 78 and 79, of *CH* 8, 193, and apparently of the Atrax hoard.<sup>5</sup> Early facing head drachms were particularly well represented in *CH* 9, 65, whose 308 specimens and more than 90 obverse dies served to define the coinage clearly (Lorber 1992). The number of obverse dies recorded has now grown to 140, indicating the important volume of this coinage.<sup>6</sup> So far no evidence has emerged to anchor the absolute chronology of the early facing head drachms, but provisionally they can be dated c. 405/400–c. 370.

Early facing head drachms are quite varied in obverse iconography and style, reflecting the stimulating challenge presented by the facing head motif to Larissa's die engravers, some of whom signed their dies. The reverse type is usually a grazing horse, though the type of a crouching horse, about to roll, was employed for a time, and the horse is occasionally depicted in other postures. The early facing head drachms form seven groups defined by iconographic types in combination with die links. The order of the groups in Lorber 1992 requires revision. The signature of the artist ΣΙΜΟ[, the exceptional crouching horse reverse type, and a distinctive reverse style all carry over from Group One to the beginning of Group Four but are not involved in the intervening groups, suggesting that Groups One and Four should be associated (Lorber 1992: cf. nos. 20, 42.3, 56, 61.1, 62.1; nos. 17–18, 42.1; cf. nos. 3.1, 7.3, 42.2; here Pls. 44–45, 72, 73, 76, 80, 81, 85–87). *CH* 9, 64 and 77 added to this list Group One drachms whose reverse exhibits the characteristic style of Group Four (Pl. 44, 77). Finally, the Commerce 2007 hoard is the only one of our hoards to close before the end of the early facing head drachm coinage. It includes six examples of Group Two and one of Group Seven, but no examples from any other group. This pattern clearly signals that the production of early facing head drachms commenced with Group Two. Group Seven conceiv-

4. For Martin, Herrmann's Series M was a later variety, and Series I and K belonged to the middle group (Martin 1983: 26).

5. Early facing head drachms were certainly the opening coins of the portion of the hoard published by Oeconomides 1969, but the additional lots recorded from commerce (*CH* 4, 21; *CH* 5, 20) leave open the possibility that the hoard contained other varieties that were not recorded.

6. An updated text catalogue of the early facing head drachms, with new (but still provisional) die numbers, is available online at [www.lightfigures.com/numismat/larissa/index.php](http://www.lightfigures.com/numismat/larissa/index.php).

ably came next, but in the absence of supporting evidence it seems prudent to retain Group Seven at the end of the sequence based on its stylistic affinities to middle facing head drachms. Provisionally, the early facing head drachms should be resequenced in the following order: Two, Three, One, Four, Five, Six, Seven. The early facing head drachms are illustrated in this order on Pl. 47.

Certain technical problems set Group Three (Pl. 44, 70–71) apart from the rest of the early facing head drachm coinage. One of its obverse dies suffered disfiguring damage (Lorber 1992: die 36; Pl. 44, 71) and was either recut or used to generate a new die, but without eliminating the flaws. A high percentage of Group Three drachms also show severe double striking on the reverse, and the example illustrated on Pl. 44, no. 71 inexplicably includes a double struck countermark. The prevalence of die and production problems at a mint with a long history of high standards implies a sudden loss of experienced personnel, probably through severe stasis or a devastating military attack. The collapse of quality control standards and the release of markedly defective coins into circulation may reflect an emergency in which rapid currency production took precedence over other considerations.

Middle facing head drachms correspond to Herrmann's Group VII, Series B through H and L (Pl. 45, 95–99). This is the last group in which the facing head is sometimes oriented three quarters right, and the group that spans the change from *omicron* to *omega* in the ethnic. It is also characterized by a number of unusual reverse types: a dismounted rider, associated with the last appearance of the legend  $\Lambda\text{API}\Sigma\text{AION}$ , a horseman, a mare with her foal, a grazing horse with a *bucranium* under its belly. Middle facing head drachms are the closing coins of CH 9, 67 and the opening coins of CH 9, 87. They occur in many Thessalian hoards, including Zarkon and Atrax (Varoucha 1964: pl. 1 nos. 14–16, 18; Oeconomides 1969: 103, nos. 258–266, 106–107, nos. 13–18). The middle facing head drachms in the hoards are predominantly of the variety with the mare and foal reverse. Many of the other varieties are poorly represented, possibly an indication that the original issues were small.

Larissa's late facing head drachms correspond to Herrmann's Group VII, Series A, all with the nymph's head oriented to the left, the reverse type of a horse crouching, about to roll, and the ethnic  $\Lambda\text{API}\Sigma\text{AION}$  placed half above the horse and half in the exergue (Pl. 46, 102–111, 115). Late facing head drachms are represented in CH 9, 77–79, 87, and 121, in CH 8, 193, and in Zarkon and Atrax (Varoucha 1964: pl. 1, no. 17; Oeconomides 1969: 106, nos. 2–12); the group indicated for CH 9, 65 was probably intrusive. The late facing head drachms can be subdivided into four phases (Lorber 2000: 7–15). The boundaries between the first and second phases and again between the second and third phases are somewhat arbitrary. The number of types within these phases and the relative chronology of the types should be considered provisional pending the results of a full die study.



Phase L-I exhibits many variations in portrait style, in the dressing of the nymph's hair, in the orientation of the horse, and in the disposition of the legend (pl. 78, 102–104). The ethnic may begin above the horse and finish in the exergue, or it may begin in the exergue and finish above the horse; it is divided either  $\Lambda\text{API}\Sigma / \text{AI}\Omega\text{N}$  or  $\Lambda\text{API} / \Sigma\text{AI}\Omega\text{N}$ . *CH* 9, 77 and 79 both close early in Phase L-I, the former with seven specimens of an emission showing the horse crouching left, with  $\Lambda\text{API}$  in the exergue and  $\Sigma\text{AI}\Omega\text{N}$  above the horse (Pl. 46, 102). Because this hoard is large and relatively complete, its closing coins very likely represent the earliest of the Phase L-I emissions. A Phase L-I drachm is the latest of the illustrated coins of the Zarkon(?) hoard (Varoucha 1964: pl. 1, no. 17).

The reverse type becomes standardized with Phase L-II: a horse crouching right, about to roll, with  $\Lambda\text{API}$  above and  $\Sigma\text{AI}\Omega\text{N}$  in the exergue (Pl. 46, 105–107). At a certain point in Phase L-III a low, asymmetrical plant was added to the reverse design beneath the horse (Pl. 46, 111), and on at least one die the horse was turned to the left—by now, a surprising variation. The transition from the plain horse to the plant type can be traced in several different die sequences, indicating the simultaneous use of multiple anvils. Only one hoard, *CH* 9, 87, definitely closes with the L-III plant emission, though this may also be the case with the Atrax hoard (cf. Appendix 2). The staters are associated by style with drachms of Phases L-II and L-III (Pl. 46, 112–114).

Phase L-IV is a single issue featuring a childlike head of the nymph that differs markedly in style from the heads of Phase L-II and L-III drachms. The issue is also identified by a trident head beneath the horse on the reverse (Pl. 46, 115). Its position at the end of Larissa's drachm coinage is clear from the hoard evidence. Phase L-IV is lacking from *CH* 9, 87 but represented in *CH* 8, 193 and in *CH* 9, 78, and 121, and in the latter two hoards the Phase L-IV drachms were significantly fresher than those of Phases L-II and L-III. This difference in condition, coupled with the break in style, may indicate that some time passed between Phases L-III and L-IV. The L-IV drachms were associated with coins of Alexander III in both *CH* 8, 193 and *CH* 9, 121 and it is tempting to link this late and apparently isolated issue with the Lamian War.

The overlapping of hoards sheds some light on the relative chronology of three isolated drachm issues: drachms pairing the facing head of Aleuas and an eagle on thunderbolt reverse (Herrmann Group VIII; here Pl. 45, 94); : profile head drachms in the style of Euaenetus, with a trotting horse reverse (Herrmann Group V; here Pl. 45, 100); and drachms with the types bull/horseman (Herrmann Group VI; here Pl. 46, 101).

Aleuas head drachms occur only in *CH* 9, 67, whose latest coins are otherwise three middle facing head drachms. The absence of the Aleuas issue from hoards with earlier closures seems to indicate that it should precede or follow the middle facing

head drachms. This relative chronology receives some support from past commercial offerings that associate Aleuas drachms with middle facing head drachms and bull/horseman drachms, perhaps reflecting the contents of other, unrecorded hoards (Hess-Leu, 24 March 1959, lot 179–184; Giessener Münzhandlung 44, lot 271–274, 281, 283). On the other hand, the Aleuas drachms in CH 9, 67 show more wear than many of the early facing head drachms, suggesting the possibility that the Aleuas issue was contemporary or even earlier. Although our hoard evidence is inconclusive, it does at least exclude the interpretation of Marta Sordi, who noted typological similarities to the “eagle” coinage of Alexander the Great and deduced a date at the beginning of his reign (Sordi 1956).

Herrmann believed that the profile head drachms in the style of Euaenetus immediately followed the other profile head drachms (Herrmann 1925: 39–40). The use of *omega* in the ethnic indeed assures that Euaenetus style drachms are later than the profile head drachms of Herrmann Groups IVa and IVc, which spell the ethnic with *omicron*. As noted above, the orthographic transition from *omicron* to *omega* occurs in the sequence of middle facing head drachm emissions, implying that the Euaenetus style drachms cannot precede the middle facing heads. The single Euaenetus style drachm in CH 8, 137 may be intrusive, as the hoard otherwise appears to close with early facing head drachms. Euaenetus style drachms were also present in CH 9, 77, where their numbers and die linkage suggest they are among the latest components of the hoard, probably falling between the middle and late facing head drachms. Euaenetus style drachms are lacking from three other hoards that associate Herrmann Group IV profile head drachms with early facing head drachms (CH 9, 64, 65, and 67) and also, so far as we know, from Zarkon(?).

Bull-horseman drachms occurred in only one of the hoards, CH 9, 77. The number and condition of the coins suggested that they might be among the latest issues in the hoard, probably falling, like the Euaenetus style drachms, between middle and late facing head drachms.

No hoard in the record closes with bull wrestler types or profile head drachms. And except for the Commerce, 2007 lot, all the hoards that close with early facing head drachms appear to cover the entire period of this coinage. This long horizon of hoard formation contrasts with what may be a fairly compressed period of deposit.

The closure of CH 9, 64 and 65, and of CH 8, 137 roughly correlates with the end of Larissa's early facing head drachms. CH 9, 65 is a very large hoard of more than 1085 coins. The absence of Theban staters—present in CH 9, 67, 77, and 121 and in most of the additional hoards listed in Appendix 2—is perhaps a sign that this hoard was deposited before 369, when the first intervention of Pelopidas may have introduced the Theban “magistrate” staters into Thessaly. These begin

to show up in the hoards about the same time as the middle facing head drachms of Larissa. CH 9, 67, which closed with three middle facing head drachms representing three different issues, included one Theban stater, signed ΠΤ—ΟΙ. Theban “magistrate” staters are also associated with middle facing head drachms in CH 9, 77, which closed with the first issue of late facing head drachms, and in the Zarkon(?) hoard, which may have sampled only Phase L-I.

Further weakish support for dating the middle facing head drachms to the 360s may be provided by the Vergina hoard (IGCH 386; Le Rider 1977: hoard 3). Its latest identifiable Larissa drachm was a middle facing head variety with the mare and foal reverse (Varoucha 1962: pl. 9, 5). According to Le Rider’s chronology, the associated tetradrachms of Philip II were minted in the years c. 348/7–c. 343/2, implying a date of deposit in or after this period. The alternate chronology proposed by Martin Price would raise the probable date of deposit to c. 353 (Price 1979: 236–241).

Other Macedonian hoards that associate late facing head drachms with tetradrachms of Philip II include Kalamaria (IGCH 385) and Thessalonica region, c. 1965 (CH 1, 37) (see Appendix 2). These hoards may fix the beginning of the late facing head coinage in the 350s, if Price’s chronology is preferred to that of Le Rider (Lorber 2000: 9, 10). The assumption here is that coins of Larissa moved fairly quickly to Macedonia, carried by Philip’s troops after his several interventions in Thessaly. It is possible to examine the same hoards and reach very different conclusions. After surveying the hoards and the finds of Larissa coins in the Olynthus excavations, Martin deduced a “hint that facing-head types were not yet so numerous in, say, the late 360s BC that they had migrated to Macedonia in large numbers” (Martin 1983:30). He eventually proposed an extended period of emission for his series A-M (our late facing head drachms and staters) from c. 375 to 320 (Martin 1983: 32–33). The high upper date derived from comparison with the staters of Pherae and from a reported hoard containing a “worn” Larissa stater and four Chalcidian League tetradrachms (IGCH 371), probably deposited in 348 (Martin 1983: 27–29). This report remains a puzzling and problematic item in our dossier of hoards.

## REFERENCES

- Babelon, E. 1932. *Traité des monnaies grecques et romaines*, Part 2: *Description historique*, Volume 4. Bologna: Forni Editore (1967 reprint of Paris original).
- Fischer-Bossert, W. 2003. Review of S. Lavva. *Die Münzprägung von Pharsalos*. *Numismatic Chronicle* 163: 399–405.
- Franke, P. R. 1970. ΦΕΘΑΛΟΙ—ΦΕΤΑΛΟΙ—ΠΕΤΘΑΛΟΙ—ΘΕΣΣΑΛΟΙ. Zur Geschichte Thessaliens im 5. Jahrhundert v. Chr. *Archäologischer Anzeiger* 1: 85–93.

- Herrmann, F. 1925. Die Silbermünzen von Larissa in Thessalien. *Zeitschrift für Numismatik* 35: 1–69.
- Kagan, J. 2004. The so-called Persian weight coins of Larissa. *Obolos* 7: 79–86.
- Lavva, S. 2001. *Die Münzprägung von Pharsalos*. Saarbrücker Studien zur Archäologie und alte Geschichte 14. Saarbrücken: Saarbrücker Druckerei und Verlag.
- Le Rider, G. 1977. *Le Monnayage d'argent et d'or de Philippe II*. Paris: E. Bourgey.
- Liampi, K. 1996. Das Corpus der Obolen und Hemiobolen des Thessalischen Bundes und die politische Geschichte Thessaliens im 2. Viertel des 5. Jahrhunderts v. Chr. In *Hellas und der griechische Osten: Studien zur Geschichte und Numismatik der griechischen Welt. Festschrift für Peter Robert Franke zum 70. Geburtstag*, W. Leschhorn, A.V.B. Miron, and A. Miron, eds., pp. 99–126. Saarbrücken: SDV Saarbrücker Druckerei und Verlag GmbH.
- Lorber, C. C. 1990. *The civic coinage of Amphipolis in silver and gold*. Los Angeles: Numismatic Fine Arts International.
- . 1992. The early facing head drachms of Thessalian Larissa. In *Florilegium Numismaticum: Studia in Honorem U. Westermark Edita*, H. Nilsson, ed., pp. 259–282. Stockholm: Svenska Numismatiska Föreningen.
- . 1999. Thessalian countermarks. In *Travaux de numismatique grecque offerts à Georges Le Rider*, M. Amandry, S. Hurter, and D. Bérend, eds., pp. 221–237. London: Spink.
- . 2000. A hoard of facing head Larissa drachms. *Schweizerische Numismatische Rundschau* 79: 7–25.
- Martin T. R. 1983. The chronology of the fourth-century BC facing-head silver coinage of Larissa. *American Numismatic Society Museum Notes* 28: 1–34.
- . 1985. *Sovereignty and coinage in classical Greece*. Princeton: Princeton University Press.
- Oeconomides, M. 1969. Nomismata ex Atragos. *Archaiologika Analekta ex Athenon* 2: 102–107.
- . 1970. Chronika. *Archaiologikon Deltion* 25: 10.
- . 1982. Chronika. *Archaiologikon Deltion* 37: 1.
- Price, M. J. 1979. The coinage of Philip II. *Numismatic Chronicle* 139: 236–241.
- Sordi, M. 1956. La dracma di Aleuas e l'origine di un tipo monetario di Alessandro Magno. *Annali del Istituto italiano di numismatica* 3: 9–22.
- Varoucha, I. 1962. Acquisitions du Musée Numismatique d'Athènes. *Bulletin de Correspondance Hellenique* 86: 417–418.
- . 1964. Chronika. *Archaiologikon Deltion* 19: 8 and pl. 1.
- Wartenberg, U., M. J. Price, and K. A. McGregor, eds. 1994. *Coin Hoards. Volume VIII: Greek Hoards*. London: Royal Numismatic Society.

## APPENDIX 1

DIE SEQUENCES OF BULL WRESTLER HEMIDRACHMS OF LARISSA  
REPRESENTED IN RECENT HOARDS

Series 1. With 19 on obverse and a die-linked variety without letters

## 1. O1 R1

*Obv.* Stocky bull wrestler semi-crouching r. on ex. line, *kausia* behind head, placing band across forehead of bull forepart leaping r.; 19 beneath bull's belly A—A.  
*Rev.* Bridled horse forepart r., emerging from edge of incuse, reins looped loosely over withers, sandal below. Small incuse square. Dies of Herrmann pl. ii, 8. Pl. 41, 17.

- a. 2.90 g 10:30 CH 9, 65.
- b. 3.15 g 8:00 CH 9, 65.
- c. CH 9, 67.

## 2. O1 R2

*Obv.* Same obverse die A on l., AFI above.

*Rev.* Bridled horse forepart (including most of rump) leaping l., emerging from thickening at edge of die, head raised, inverted triangular ornament on rein under chin, rein looped very loosely around neck (?) and trailing under belly, sandal below. Dies of Boston 879. Pl. 41, 18.

- a. 2.95 g 3:00 NFA Buy/Bid Sale, 9 Sept. 1993, lot 121. CH 9, 65.
- b. 2.90 g 9:00 Lorber 1999, p. 231, no. 9 (with AK countermark on obverse near edge). CH 9, 65.
- c. 2.90 g 5:00 Lorber 1999, p. 231, no. 10 (with FK countermark on obverse near edge). CH 9, 65.
- d. 2.98 g 12:00 Lorber 1999, p. 231, no. 11 (with rayed disk countermark on bull's midriff). CH 9, 65.
- e. 2.93 g 6:00 Lorber 1999, p. 231, no. 12 (with rayed disk countermark of bull's midriff). CH 9, 65.
- f. 2.87 g 2:00 CH 9, 65.
- g. 2.99 g 8:00 CH 9, 65.
- h. 2.84 g 12:00 CH 9, 65.
- i. 2.83 g 1:30 CH 9, 65.
- j. 2.98 g 9:00 CH 9, 65.
- k. 2.80 g 5:00 CH 9, 65.
- l. 2.88 g 7:00 CH 9, 65.
- m. 2.87 g 5:00 CH 9, 65.
- n. 2.73 g 1:00 CH 9, 65.
- o. 2.92 g 9:00 CH 9, 65.
- p. 2.84 g 2:30 CH 9, 65.
- q. 2.92 g 6:00 CH 9, 65.

r.	2.91 g	9:00	CH 9, 65.
s.	2.99 g	11:00	CH 9, 65.
t.	2.91 g	4:30	CH 9, 65.
u.	2.26 g	9:00	CH 9, 65.
v.	2.91 g	9:00	CH 9, 65.
w.	2.82 g	6:00	CH 9, 65.
x.	2.95 g	2:30	CH 9, 65.
y.	3.02 g	6:00	CH 9, 65.
z.	2.83 g	7:30	CH 9, 65. Obverse off center.
aa.			CH 9, 67, inv. 410.
bb.			CH 9, 67, inv. 417.
cc.			CH 9, 67, inv. 420.
dd.	2.90 g	11:00	CH 9, 77, inv. D/E-2-8.
ee.	2.96 g	11:00	CH 9, 77, inv. D/E-2-9.
ff.	3.00 g	8:00	CH 9, 77, inv. D/E-2-10.
gg.			Larissa environs, 1984 (CH 8, 137), pl. xi, 21.
hh.	2.80 g	8:00	Commerce, 2007, inv. 9.4
ii.	2.84 g	5:00	Commerce, 2007, inv. 9.5.
jj.	2.63 g	9:00	Commerce, 2007, inv. 9.6.
kk.	2.92 g	9:00	Commerce, 2007, inv. 9.7.

3. O<sub>1</sub> R<sub>3</sub>

*Obv.* Same obverse die, in latest state/ΛΛ above, P (retrograde) reading downward on l., ΙΞΑ below.

*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, inverted triangular ornament on rein before neck, reins looped loosely around neck and tied in loop over withers. Pl. 41, 19.

a.	2.99 g	5:00	CH 9, 65.
b.	2.83 g	11:00	CH 9, 65.
c.	2.86 g	5:00	CH 9, 65.
d.	2.94 g	4:30	CH 9, 65.
e.	2.99 g	5:00	CH 9, 65.
f.			CH 9, 67, inv. 411.
g.	2.85 g	2:00	CH 9, 77, inv. D/E-2-7.
h.	2.89 g	8:00	Commerce, 2007, inv. 9.2.
i.	2.88 g	5:00	Commerce, 2007, inv. 9.3.

4. O<sub>2</sub> R<sub>2</sub>

*Obv.* Bull forepart l., superimposed on bull wrestler standing facing on ex. line, head l., *kausia* behind head.

*Rev.* Reverse die R<sub>2</sub> in later state (thickening at edge of flan now obscures horse's rump). Pl. 41, 20.

a.	2.99 g	4:30	NFA Buy/Bid Sale, 9 Sept. 1993, lot 122. CH 9, 65.
----	--------	------	--

Series 2. With  $\succ\odot$ ,  $\circ\succ$ , and  $\succ\odot$  on obverse5. O<sub>3</sub> R<sub>4</sub>

*Obv.* Bull wrestler semi-crouching r., *kausia* behind, placing band across forehead of bull forepart leaping r.,  $\circ\succ$  beneath bull's belly, no ex. line / $\wedge\wedge$  reading upward on l., R upper r., | placed horizontally on r., | A— $\succ$  below.

*Rev.* Bridled horse forepart galloping r., triangular ornament on rein beneath chin, reins looped loosely around neck and trailing beneath belly just before the truncation. Dies of Herrmann pl. ii, 11. Pl. 41, 21.

- a. 2.88 g 7:30 CH 9, 65.
- b. 2.98 g 7:30 CH 9, 65.
- c. 2.90 g 5:00 CH 9, 65.
- d. CH 9, 67, inv. 416.
- e. 2.77 g 5:00 Commerce, 2007, inv. 9.8.
- f. 2.82 g 5:00 Commerce, 2007, inv. 9.9.

6. O<sub>3</sub> R<sub>5</sub>

*Obv.* Same obverse die/ $\wedge\wedge$  reading upward on l., P upper r., | placed horizontally on r., | A— $\succ$  (?) below.

*Rev.* Bridled horse forepart galloping r., triangular ornament on rein beneath chin, reins looped loosely around neck and trailing beneath belly just before the truncation. Dies of Herrmann pl. ii, 10. Pl. 41, 22.

- a. 3.00 g 11:00 CH 9, 65.
- b. 2.80 g 4:00 CH 9, 65.
- c. 2.75 g 11:00 CH 9, 65.
- d. 2.98 g 9:00 CH 9, 65.
- e. CH 9, 67, inv. 413.
- f. CH 9, 67, inv. 421.

7. O<sub>4</sub> R<sub>5</sub>

*Obv.* Bull wrestler with heavy buttocks and thighs r., *kausia* behind head, placing band around forehead of bull forepart leaping r.,  $\succ\odot$  in ex.

*Rev.* Same reverse die.

- a. 2.80 g Paris. Babelon 1932, no. 670, pl. ccxcvii, 4.

8. O<sub>5</sub> R<sub>5</sub>

*Obv.* Bull wrestler semi-crouching r., *kausia* behind, placing band around forehead of bull forepart leaping r.,  $\succ\odot$  beneath bull's belly, no ex. line.

*Rev.* Same reverse die. Pl. 41, 23.

- a. 3.02 g 5:00 CH 9, 65.
- b. 2.80 g 1:30 CH 9, 65.
- c. 2.82 g 6:00 CH 9, 65.
- d. 2.82 g 11:00 CH 9, 65.
- e. 2.92 g 1:00 CH 9, 65.

## 9. O6 R5

*Obv.* Bearded bull wrestler r., leaning back and bracing against left leg, *kausia* behind, placing band around forehead of bull forepart leaping r., > between hero's legs and ⊙ under bull's forelegs.

*Rev.* Same reverse die. Pl. 42, 24.

- a. 3.00 g 8:00 NFA Buy/Bid Sale, 9 Sept. 1993, lot 120. CH 9, 65.
- b. CH 9, 67, inv. 324.
- c. CH 9, 67, inv. 337. Circled + countermark on bull's midriff.

## 10. O6 R6

*Obv.* Same obverse die/ΛA reading upward on l., Π reading downward on r., I A below.

*Rev.* Bridled horse forepart leaping r., emerging from edge of die, reins looped loosely around neck. Pl. 42, 25.

- a. 2.98 g 5:00 CH 9, 65.
- b. 2.93 g 12:00 CH 9, 65.

Series 3. With ΥΠ on obverse and a die-linked variety without letters

## 11. O7 R7

*Obv.* Bull wrestler running l. on ex. line, leaning slightly forward, *kausia* on shoulder, placing band around forehead of bull forepart leaping l., a flaw between hero's legs, dotted border/Λ—A above, P—I below.

*Rev.* Bridled horse forepart r. emerging from edge of die, head raised, two reins descending from bridle, triangular ornament on nearer rein beneath chin, reins looped loosely around neck and tied in loop at withers (with two twists at bottom of loop). Pl. 42, 26.

- a. In commerce with Christie's. CH 9, 67.

## 12. O8 R7

*Obv.* Similar obverse die with ΥΠ between hero's legs.

*Rev.* Same reverse die. Pl. 42, 27.

- a. 2.96 g 12:00 CH 9, 65.
- b. 2.85 g 2:00 CH 9, 65.
- c. 2.99 g 6:00 CH 9, 65.
- d. 3.03 g 6:00 CH 9, 65.
- e. 2.98 g 12:00 CH 9, 65.
- f. 2.88 g 9:00 Commerce, 2007, inv. 9.12.

## 13. O8 R8

*Obv.* Same obverse die/Λ—A above, 9 I below.

*Rev.* Bridled horse forepart r., emerging from edge of die, head raised, triangular ornament on rein beneath chin, reins looped loosely around neck and tied



in loop over withers (with three twists at bottom of loop). Dies of Herrmann pl. ii, 4. Pl. 42, 28.

- a. 2.99 g 12:00 CH 9, 65.
- b. 2.92 g 9:00 CH 9, 65.
- c. 2.94 g 6:00 CH 9, 65.
- d. 3.13 g 4:30 CH 9, 65.
- e. 2.96 g 3:00 CH 9, 65.
- f. 2.76 g 1:00 CH 9, 65.
- g. 3.03 g 2:00 CH 9, 65.
- h. 2.95 g 2:00 CH 9, 65.
- i. 2.95 g 2:00 CH 9, 65.
- j. 2.85 g 4:30 Graitto between legs. CH 9, 65.
- k. CH 9, 67, inv. 414.
- l. CH 9, 67, inv. 423.
- m. 2.94 g 12:00 Commerce, 2007, inv. 9.13.
- n. 3.10 g 10:00 Commerce, 2007, inv. 9.14.
- o. 2.99 g 1:30 Commerce, 2007, inv. X.36.

Series 4. With  $\square$  and  $\top$  on obverse

14. O<sub>9</sub> R<sub>9</sub>

*Obv.* Bull wrestler r. on full ex. line, stepping forward with raised right foot, *kausia* behind head, placing band around forehead of bull forepart leaping r.,  $\square$  under bull's belly, dotted border /  $\wedge$ —A above, P reading downward on r., I below. *Rev.* Bridled horse forepart leaping r., emerging from edge of die, head raised reins, looped loosely around neck and tied in loop over withers, sandal below. Pl. 42, 29.

- a. 2.76 g 12:00 CH 9, 65.

15. O<sub>9</sub> R<sub>10</sub>

*Obv.* Same obverse die / A— $\wedge$  above, P I below.

*Rev.* Bridled horse forepart leaping r., emerging from edge of die, head raised, triangular ornament on rein beneath chin, reins looped loosely around neck and tied in loop over withers, sandal(?) to r. of Pl. Pl. 42, 30.

- a. 2.97 g 3:00 CH 9, 65.
- b. Larissa environs, 1984 (CH 8, 137), pl. xi, 24.

16. O<sub>9</sub> R<sub>11</sub>

*Obv.* Same obverse die /  $\wedge$ —A above, P—I below.

*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, perhaps a triangular ornament on rein beneath chin, reins looped and tied at withers, sandal below between P and I. Dies of Babelon 1932, no. 669, pl. ccxcvii, 3. Pl. 42, 31.

- a. 3.00 g 6:00 CH 9, 65.

- b. 2.94 g 9:00 CH 9, 65.  
c. CH 9, 67, inv. 422.
17. O<sub>9</sub> R<sub>12</sub>  
*Obv.* Same obverse die/Λ—A above, P—I below.  
*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, triangular ornament on rein beneath chin, reins looped and tied at withers, sandal below between P and l. Dies of Herrmann pl. ii, 9. Pl. 42, 32.  
a. 2.97 g 9:00 CH 9, 65.  
b. 3.01 g 12:00 CH 9, 65.
18. O<sub>10</sub> R<sub>9</sub>  
*Obv.* Bull wrestler running l. on ex. line, *kausia* behind neck, placing band around forehead of bull forepart leaping l., T O between hero's legs, dotted border.  
*Rev.* Reverse die of cat. no. 14. Pl. 42, 33.  
a. 2.91 g 3:00 CH 9, 65.  
b. CH 9, 67, inv. 419.  
c. 2.96 g 6:00 CH 9, 77, inv. D/E-2-12.
19. O<sub>10</sub> R<sub>13</sub>  
*Obv.* Same obverse die/Λ—A above, P—I below.  
*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, triangular ornament on rein under chin, reins looped loosely around neck and tied in loop at withers, loose end of rein trailing almost parallel to horse's belly, sandal below between P and l.  
a. Berlin. Herrmann pl. ii, 6.
20. O<sub>10</sub> R<sub>14</sub>  
*Obv.* Same obverse die/Λ—A above, P—I below.  
*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, triangular ornament on rein under chin, reins looped loosely around neck and tied in loop at withers, loose end of rein just visible under horse's belly, sandal below between P and l. Pl. 42, 34.  
a. 3.07 g 11:00 CH 9, 65.  
b. 2.99 g 7:30 CH 9, 65.  
c. 2.99 g 11:00 CH 9, 65.  
d. 2.96 g 5:00 CH 9, 65.  
e. 2.92 g 5:00 CH 9, 65.  
f. 3.02 g 7:30 CH 9, 65.  
g. 2.90 g 3:00 CH 9, 65.
21. O<sub>10</sub> R<sub>15</sub>  
*Obv.* Same obverse die/Λ—A above, P—I below.  
*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, triangular ornament on rein under chin, reins looped loosely

around neck and tied in loop at withers, loose end of rein trailing almost parallel to horse's belly, sandal below between P and I. Pl. 42, 35.

- a. 2.94 g 9:00 CH 9, 65.
- b. CH IX 67, inv. 418. Reverse die identity uncertain.
- c. Larissa environs, 1984 (CH 8, 137), pl. xii, 1.
- d. 2.93 g 9:00 Commerce, 2007, inv. 9.10.
- e. 2.94 g 5:00 Commerce, 2007, inv. 9.11.

22. O11 R16

*Obv.* Similar obverse die, but hero taller with different pattern of folds in his falling cloak, bull's forelegs shorter and thicker with prominent cleft hooves, and control letters unclear/Λ—A above, P—I below.

*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, three folds at throat, triangular ornament on rein under chin, reins looped loosely around neck and tied in loop at withers, loose end of rein trailing under horse's belly to right of letter I, sandal below between P and I. Pl. 42, 36.

- a. 2.95 g 5:00 NFA Buy/Bid Sale, 9 Sept. 1993, lot 123. CH 9, 65.
- b. 3.01 g 6:00 CH 9, 65.

23. O12 R16

*Obv.* Similar obverse die, but bull's forelegs slightly longer and narrower, still with prominent cleft hooves, control letters T O clear.

*Rev.* Same reverse die.

- a. Larissa environs, 1984 (CH 8, 137), pl. xi, 22.

24. O12 R17

*Obv.* Same obverse die/Λ—A above, P—I below.

*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, triangular ornament on rein beneath chin, reins looped and tied at withers, sandal below between P and I. Pl. 42, 37.

- a. 3.01 g 6:00 CH 9, 65.
- b. 3.13 g 3:00 CH 9, 65.
- c. 2.88 g 2:00 Test cut all across obverse. CH 9, 65.
- d. 3.02 g 6:00 CH 9, 65.
- e. 3.03 g Berk 55, 19 October 1988, lot 93.
- f. 2.88 g 6:00 CH 9, 77, inv. D/E-2-11.

25. O13 R17

*Obv.* Bull wrestler running l. on ex. line, *kausia* behind neck, placing band around forehead of bull forepart leaping l., dotted border.

*Rev.* Same reverse die. Pl. 42, 38.

- a. 2.99 g 4:30 CH 9, 65.

## Series 5. Unmarked and unlinked issue

## 26. O14 R18

*Obv.* Bull wrestler running l. on ex. line, leaning slightly forward, *kausia* behind neck, placing band around forehead of bull forepart leaping l., dotted border/ $\wedge$ —A above, P—l below.

*Rev.* Bridled horse forepart leaping l., emerging from thickening at edge of die, head raised, triangular ornament on rein beneath chin, reins looped loosely around neck and tied in loop at withers, sandal below between P and l. Pl. 42, 39.

- a. 2.95 g 9:00 CH 9, 65.
- b. 2.95 g 3:00 CH 9, 65.
- c. 3.03 g 3:00 CH 9, 77, inv. D/E-2-6.

## Series 6. With plant

## 27. O15 R19

*Obv.* Bull wrestler walking r. on ex. line, *kausia* behind head, cloak blowing behind, placing band around forehead of bull forepart leaping r., bull's head turned three-quarters facing, plant before hero's feet, dotted border/ $\wedge$ —A across upper field, P1ε reading downward on r., O l A below.

*Rev.* Bridled horse forepart leaping r., reign trailing between forelegs. Pl. 42, 40.

- a. CH 9, 77, inv. D/E-2-13.

## 28. O16 R20

*Obv.* Bull wrestler semi-crouching r., *kausia* at back of head, cloak billowing behind, placing band around forehead of bull forepart leaping r. and twisting its head toward him, plant before hero's feet, dotted border/ $\wedge$ AP[1] (retrograde) below, εA reading upward on l., ON placed diagonally on r.;

*Rev.* Bridled horse forepart leaping l., reins looped loosely around neck and tied in loop at withers.

- a. Larissa environs, 1984 (CH 8, 137), pl. xi, 23.

## APPENDIX 2

## IDENTIFICATION OF LARISSA DRACHMS IN SOME EARLIER HOARDS

The following list updates the descriptions of several hoards containing facing head coins of Larissa that were originally identified only by reference to Herrmann 1925.

**Vergina, Macedonia, 1961** (*IGCH* 386; Le Rider 1977: hoard 3)

4 Larissa facing head drachms, including

1 early facing head drachm (Varoucha 1962: pl. 9, 6; Lorber 1992: Head Type 10)

1 middle facing head drachm with mare and foal reverse (Varoucha 1962: pl. 9, 5)

Amyntas III: 11 didrachms, 1 triobol, 5 Æ

Perdiccas III: 6 Æ

Alexander III 11 Æ

Philip II: 2 tetradrachms (Le Rider 1977: Pella, unmarked, nos. 166, 169)

Varoucha 1962: 417–418; Le Rider 1977: 285. Le Rider suggested that the bronze coins could represent a separate find.

**Commerce, 1970** (*CH* 1, 37; Le Rider 1977: hoard 6)

2 Larissa middle facing head drachms (dismounted horseman, mare and foal)

2 Acanthus tetradrachms, both with ΑΛΕΞΙ

22 Philip II tetradrachms (Le Rider 1977: Pella, unmarked, caduceus, tripod, and thunderbolt—N emissions)

1 Sicyon stater

Le Rider 1977: 292–293. Le Rider suggested that this might be a lot from the Kalamaria hoard (below).

**Larissa environs (Zarkon?), 1962–1963** (*IGCH* 52)

Larissa drachms and staters, including

1 profile head drachm (Varoucha 1964: pl. 1, 13)

2 early facing head drachms (Varoucha 1964: pl. 1, 19–20; Lorber 1992: cf. nos. 46.1, 82.1)

4 middle facing head drachm (3 with mare and foal reverse) (Varoucha 1964: pl. 1, 14–16, 18)

1 middle facing head drachm with mare and foal reverse, possibly from this hoard (Oeconomides 1970: 10, pl. 5, 9)

1 late facing head drachm, Phase LI (Varoucha 1964: pl. 1, 17)

Locri Opuntii staters

Thebes staters, signed ΑΡΚΑ, ΓΕΡΓ, ΔΑΜ, ΕΥΑΡΑ, ΗΙΣΜ, ΚΑΒΙ, ΚΑΛΛ, ΚΛΙΩ[Ν], ΠΕΛΙ, ΠΤΟΙ, ΠΥΘ, ΤΙΜΙ

Athens tetradrachms

Sicyon staters

Varoucha 1964: 8–9

**Kalamaria, near Thessalonica, 1963 (IGCH 385; Le Rider 1977: hoard 4)****62 Larissa drachms, including**

2 bull/horseman (Le Rider 1977: 289)

2 middle facing head drachms (bucranium, mare and foal) (Le Rider 1977: 289)

2 late facing head drachms, Phase L-I (Varoucha 1964: pl. 1, 8–9)

**3 Acanthus: Π, ΠΙ and dolphin, ΑΛΕΞΙΟΣ****1 Chalcidian League tetradrachm, unsigned****136 Philip II tetradrachms (Le Rider 1977: Pella, unmarked, caduceus, tripod, thunderbolt, thunderbolt-N)****2 Boeotia staters****30 Thebes staters, signed ΑΓΛΑ, ΑΜΦΙ, ΑΝΔΡ, ΑΝΤΙ, ΑΠΟΛ, ΑΡΚΑ, ΔΙΟΝ, ΕΠΠΑ, ΕΥΡΑΡ, ΦΑΣΤ, ΗΙΣΜ, ΘΕΟΓ, ΚΑΒΙ, ΚΑΛΙ, ΚΑΛΛΙ, ΠΕΛΙ, ΠΥΘΙ, ΤΙΜΙ, ΨΑΡΟ****6 Sicyon**

Varoucha 1964: 8; Le Rider 1977: 286–289

**Thessalonica region, c. 1965 (CH 1, 37; Le Rider 1977: hoard 5)****2 Larissa drachms**

1 early facing head (Le Rider 1977: pl. 50, 25; Lorber 1992: Group Four, obverse die 46)

1 late facing head of Phase L-II (Le Rider 1977: pl. 50, 24)

**3 Amphipolis tetradrachms (Le Rider 1977: pl. 50, 18–20; Lorber 1990: nos. 37c, 41a, 43a)****3 Acanthus tetradrachms, all ΑΛΕΞΙΟΣ****17 Philip II tetradrachms (Le Rider 1977: Pella, tripod, thunderbolt, and thunderbolt—N emissions)****1 Boeotia stater****1 Thebes stater, signed ΦΑΣΤ****2 Sicyon staters, signed ΠΑ and ΑΘ**

Le Rider 1977: 290–292. Le Rider suggested this may have been a lot from the Kalamaria hoard (above).

**Off coast of Locris or Euboea, c. 1979****Larissa: 2 drachms, 1 hemidrachm, including**

1 late facing head drachm, Phase L-II (Oeconomides 1982: pl. 1, 3)

**3 Oenianes hemidrachms****51 Lamia hemidrachms****29 Pharsalus hemidrachms****26 Pherae hemidrachms****15 Locri Opuntii hemidrachms****80 Phocis hemidrachms****34 Boeotia hemidrachms****3 Histiaea tetrobols**

1 Aegia(?) hemidrachm

Oeconomides 1982: 1

**Malandreni**, western Argolis, 1967 (*IGCH* 103)

1 Larissa late facing head drachm, Phase L-II (Oeconomides 1970: pl. 5, 10)

4 Sicyon hemidrachms

Oeconomides 1970: 10.

**Atrax** environs, Thessaly, 1968 (*IGCH* 58 = *CH* 4, 21 = *CH* 5, 20)

266 Larissa drachms, including

5+ early facing head drachms (Oeconomides 1969: 107, figs. 20–24)

9+ middle facing head drachms (Oeconomides 1969: 103, nos. 258–266, and 106–107, figs. 13–18)

12+ late facing head drachms through Phase L-III, including plant issue (Oeconomides 1969: 106, figs. 2–12)

1 bull/horseman (Oeconomides 1969: 103, no. 1, 106, fig. 1)

55 Thebes staters, mostly magistrate issues signed ΑΓΛΑ, ΑΜΦΙ, ΑΝΤΙ, ΑΠΟΛ, ΑΡΚΑ, ΦΑΣΤ, ΔΑΙΜ, ΔΙΟΚ, ΕΠΑΜ, ΕΠΠΑ, ΕΥΓΑ/ΡΑ, ΘΕΟΓ, ΚΑΒΙ, ΚΑΛΛΙ, ΚΑΙΩ[Ν], ΚΡΑΤ, ΛΥΚΙ, ΟΛΥΜ, ΠΕΛΙ, ΠΤΟΙ, ΠΥΘ, ΤΙΜΙ, ΨΑΡΟ (Oeconomides 1969: nos. 269–323)

1 Sicyon stater

Oeconomides 1969. The Herrmann references cited for nos. 2–257 include early, middle, and late facing head drachms. It is not possible to associate individual catalogue numbers with the Herrmann references or to determine how many of the hoard coins matched our early, middle, or late classes.

## The Die Sequence of the Silver Staters of Medma

GIOVANNI GORINI\*

This article presents a die study of the coinage of the mint of Medma (South Italy) arranged in six groups which cover the period from 330 to 317 BC in a corpus of c. 89 specimens. The die analysis makes a contribution to the understanding of the poorly documented history of this ancient town and the connection with the similar coinage at Locri.

This paper incorporates and extends my study of the mint of Medma<sup>1</sup> and is intended to serve as a contribution to the establishment of the definitive die sequence of the staters of this mint of Magna Graecia at the close of the fourth century BC. The sequence of emission and the chronology of Medma's silver coinage must be considered both in the light of the five hoards that we have containing coins of Medma

\*giovanni.gorini@unipd.it

1. G. Gorini, "Per uno studio della monetazione di Medma," *Numismatica e Antichità Classiche* 14 (1985), 127–140. It should be noted that in the nineteenth century, Imhoof-Blumer ("Die Münzen Akarnaniens," *Numismatische Zeitschrift* 10 [1878]: 6–7) had already drawn attention to the staters of Medma and identified the main types. For a modern view of the problems relating to the numismatic history of the city, see M. Taliercio, "Dibattito: Pan sulle monete di Pandosia," in *Mito e storia in Magna Grecia*, Atti del trentaseiesimo Convegno di Studi sulla Magna Grecia, Taranto 4–7 ottobre 1996 (Taranto, 1997), 360–361; M. Paoletti, "Rosarno," in *Bibliografia Topografica della colonizzazione greca in Italia e nelle isole tirreniche*, ed. G. Nenci and G. Vallet, vol. 17, *Siti: Rosarno–San Bonifacio* (Pisa, Rome, and Naples, 2002), 1–51; and G. Lacquaniti, *Medma colonia di Locri Epizefiri: storia, arte, culti e costumi di una pòlis magnogreca sul Tirreno* (2003), which is derivative but contains a current bibliography.



and of some significant die linkages among specimens from auction catalogues.<sup>2</sup> These sources permit the following reconstruction.

The relevant hoards are as follows:

1. E. Sicily 1983<sup>3</sup>
2. Sicily 1912–1913      *IGCH* 2147
3. Gela 1911              *IGCH* 2198
4. Megara Hyblea 1966    *IGCH* 2180
5. Salve 1930             *IGCH* 2030

These five hoards, listed in the order of their probable date of deposit, provide a basis for understanding the various phases of production of the *Pegasi* of Medma. The first of these, found in eastern Sicily in 1983, was dispersed in commerce, so we know little of the circumstances of its discovery. The hoard contained 761 staters of Corinthian type, as well as eight Siculo-Punic tetradrachms. This constitutes the largest number of staters of the colonies of Locri found in any hoard. Ten were of Medma:

- 5 examples of Calciati n° 1 with no obv. letter / rev. letter M
- 1 example of Calciati n° 2 with no letter on obv. or rev.
- 1 example of Calciati n° 3 with ME ligate on obv. / no letter on rev.
- 1 example of Calciati n° 4 with ME ligate on obv. / M on rev.
- 1 example of Calciati n° 6 with MK ligate on obv. / M on rev.
- 1 example of Calciati n° 7 with MK ligate on obv.

This hoard contains nearly all of the types of Medma staters in fresh condition, and “il grado di usura non varia sensibilmente dalla prima emissione all’ultima.”<sup>4</sup> The clear implication is that, as Calciati puts it, “la coniazione di Medma sia avvenuta in un breve arco di tempo,”<sup>5</sup> and that this coinage began only a few years before the deposit date of the hoard. Furthermore, based on the Sicily 1912–1913 hoard (*IGCH* 2147) and the Sicily 1935 hoard (*IGCH* 2148), which were dated by Kraay in *IGCH* to 310 BC, the E. Sicily hoard can also be dated to 310 BC, because we find nearly the same composition. Note the summary of the Corinthian staters of Ravel’s Period V<sup>6</sup> contained in these three hoards in Table 1.

2. Various difficulties have prevented the exhaustive identification of all extant specimens.
3. R. Calciati, *Pegasi* (Mortara, 1990), 581–585 (henceforth Calciati).
4. *Ibid.*, 585.
5. *Ibid.*
6. G. K. Jenkins, “A note on Corinthian coins in the West,” in *Centennial Publication ANS* (New York, 1958), 367–379. For a definition of Period V, see O. Ravel, *Les ‘Poulains’ de Corinthe* (Spink 1948), pp. 116–126.

Table 1. Summary of Period V Pegasi

Corinth/Control	Sicily IGCH 2147	Sicily IGCH 2148	E. Sicily 1983
E	4	+	4
N	9	+	16
Δ	2	+10	
AP	74	+	32
Γ	14	+	7
I	4	+	4
A	37	+	15
AA	5	+	8
Δ I	21	+	4
Φ I—	+	—	
Δ I	—	+	18
AY	—	+	—
ΔO	—	+	—

From the association of coins of Corinth and Medma, one can conclude that all three hoards were deposited around 310 BC. If this date is correct, the Medma Pegasi would have commenced around 330 BC. This would mean that the Medma coinage was struck during the reign of Timoleon, during the period of the liberation of Sicilian and Italian cities from the tyranny of the two Dionisii. However, the earlier date of the Sicilian Pegasi, including those of Medma, which has been proposed by Holloway,<sup>7</sup> is supported by the hoard evidence, as has been demonstrated by Taliercio, who supports an earlier dating.<sup>8</sup>

Let us now examine the details of the hoards. Since it is the only one to contain Medma issues without ethnic (albeit a single example), the E. Sicily 1983 hoard, confirms that this issue should be considered the first, shortly preceding the other issues. This also implies that this is the earliest of the four hoards containing Med-

7. R. R. Holloway, "Il problema dei 'pegasi' in Sicilia," *Numismatica e Antichità Classiche* (1982), 129–136, proposing a continuity of Pegasi emissions in Sicily, which would date the Medma issue to the years after 350 BC (see p. 135).

8. M. Taliercio Mensitieri, "Presenza monetale di Corinto e colonie in Sicilia e in Magna Grecia nel IV e III secolo a.C. in La monetazione corinzia in Occidente III secolo a.C.," in *Atti del IX Convegno del CISN (Napoli 1986)* (Rome, 1993), 87–115, esp. 112–115. Also N. K. Rutter, *Greek coinages of southern Italy and Sicily* (London, 1997), 166, suggests a date in the second half of the fourth century BC and specifically proposes 330–320 BC in his more recent *Historia Numorum<sup>3</sup>. Italy* (London, 2001), 182.

ma Pegasi, since the others do not contain all of the Medma issues. In fact, the evidence also indicates that the issue without ethnic should be considered the first of the Medma mint, because it is not present in the other hoards. Accordingly, I designate the issue without ethnic as Group I.

Next is the Sicily hoard (*IGCH* 2147). Based on the Corinthian coins in the hoard, the deposit can be dated to 310 BC, but according to the manuscript notes on the hoard made by Newell,<sup>9</sup> the two coins of Medma in the hoard are the type with M on the reverse,<sup>10</sup> so this issue can be placed slightly after the issue without legend, and it thus belongs to what I call Group II.

Third is the Gela hoard (*IGCH* 2198), with a deposit date of 282 BC, which contains a very worn example of the type of Calciati 3. Consequently, it is probable that our Group III, which includes staters with ME on the obverse and no letters on the reverse, must precede those with ME on the obverse and M on the reverse (Group IV). This is further supported by the existence of a die link on a coin in Oxford (n. 1574, discussed below), which links Group II and Group III.<sup>11</sup>

Next, we have the Megara Hyblea hoard (*IGCH* 2180). The contents indicate a deposit date early in the third century BC; the single Medma stater, with ME/M, belongs to our Group IV.

Finally, the Salve hoard (*IGCH* 2030), is dated to the late third century BC by the presence of a Roman quadrigatus. This hoard is of little value in determining the Medma chronology, since it contains only a single Medma stater with M on reverse. Given the late deposit date of the hoard, however, it does shed light on the size of this issue, which was probably much larger than the hoard occurrences might indicate and was probably the largest of the Medma issues.

Based on the deposit dates of these five hoards, we can establish the probable die sequence of the Medma staters, divided into six main groups. After the first four groups comes Group V, with MK on the obverse and no letter on the reverse, and finally Group VI, of barbarous style, and evidently the last issue of the mint. The dies of this group were engraved by natives and not by Greeks, as can be seen from the peculiar style of the coins.

Finally, we can place the end of the Medma coinage in 317 BC, at the time of a new direction in Croton's politics. This change was marked by the advent of democracy and by the treaty of Croton with the Brettii in 317 BC,<sup>12</sup> which must

9. I am grateful to Carmen Arnold-Biucchi for allowing me access to the notes at the ANS during the summer of 1994.

10. One example now in the ANS collection, ANS 1957.172.1324 (*SNG* 587).

11. R. R. Holloway, *Ripostigli del Museo Archeologico di Siracusa* (Rome, 1989), 88, n. 15, and plate 56, n. 15.

12. Diod. 19.3.3–4; M. Taliercio, "La riduzione ponderale in Magna Grecia e, in particolare, gli stateri ridotti di Heraclea, di Thurii e di Crotona," *Dial. Arch.*, 3rd. ser., 7 (1989), n. 2, 31–52, esp. 42.

have had repercussions in Medma and other Italiote cities and perhaps led to the cessation of coinage, because we do not encounter staters of reduced weight.<sup>13</sup>

In summary, then, the organization of the coinage is as follows:

	Obverse	Reverse
Group I	no letter	no letter
Group II	no letter	M
Group III	ME ligate	no letter
Group IV	ME ligate	M
Group V	MK ligate	no letter
Group VI	barbarous style	

These groupings are also based (see below) on several die links, which permit the reconstruction of the final activities of the mint of Medma

### THE SEQUENCE OF THE PEGASI OF MEDMA

#### Group I

*Obverse:* no letter / *Reverse:* no letter.

#### O1/R1

O1 Wing feathers pointing upward.

R1 Hair curls beyond helmet neckpiece.

1. Gorny & Mosch 17, 2002, n. 70, 8.54 g
2. F. R. Künker Münzenhandlung 83, 2003, n. 53, 8.52 g

#### O2/R2

O2 First feather short, the others pointing upward.

R2 Dot between the two curls below neckpiece.

3. SNG Lloyd 659, 8.73 g = Calciati, n. 2/3
4. Campana 8.45 g = Calciati, n. 2/2
5. E. Sicily 1983, 8.452 g = Calciati, n. 2/1 = 707/2
6. F. R. Künker Münzenhandlung 104, 2005, n. 66, 8.22 g

13. To my knowledge, no firm evidence has been discovered; however, Consolo Langher, *I Brettii* (1995), 103, contends that some staters of Locri and Medma “di chiaro stampo agatocleo.” In fact, the average weight of the Medma staters is around 8.5 g, not the 6.6–6.9 g average of the Agathocles issues (see the appendix to M. Taliercio, “La riduzione ponderale in Magna Grecia e, in particolare, gli stateri ridotti di Heraclea, di Thurii e di Crotone,” *Dial. Arch.*, 3rd. ser., 7 [1989], 48–51).

**Group II***Obverse:* no letter / *Reverse:* M.**O2/R3****R3** Small M beneath neck truncation and dot under neckpiece.

- 7. Naville vii, 1924, n. 1163, 8.65 g = Calciati 2/4 = 704/1
- 8. SNG Fitzwilliam 1837, 8.36 g
- 9. Berlin, Imhoof-Blumer 1900, 8.56 g

**O2/R4****R4** Similar, with dot under neckpiece, but curls arranged differently.

- 10. SNG ANS 587 = Calciati, n. 1/13
- 11. Birkler and Waddell 1, 7/XII/1979, n. 29, 8.36 g
- 12. M&M, List 360, Sept. 1974, n. 11, 8.36 g = M&M 54, 26 Oct. 1978, n. 76 = Calciati, n. 1/10
- 13. M&M, List 462, 1984, n. 4, 8.62 g
- 14. E. Sicily 1983, 8.659 g = Calciati n. 1/9
- 15. E. Sicily 1983, 8.264 g = Calciati n. 1/11 = 705/1
- 16. E. Sicily 1983, 8.595 g = Calciati n. 1/12 = 706/1
- 17. Glendining, March 1931, n. 1090, 8.7 g
- 18. Auctiones 1986, n. 23 = Calciati n. 1/14
- 19. Berlin, Löbbecke 1906, 8.665 g
- 20. Grose, n. 1836, 8.09 g
- 21. Grose, n. 1837, 8.35 g
- 22. De Nanteuil, n. 233, 8.52 g
- 23. Hirsch 1924, n. 310, 8.45 g
- 24. Kunst und Münzen 1969, n. 3, 8.35 g

**O3/R4****O3** Slightly straighter wingfeathers.

- 25. Hirsch 25, 1909, Philipsen Coll, n. 1132 = Sartiges, Paris 1921, plate 16, n. 289
- 26. Numismatica Ars Classica 40, 2007, n. 228, 8.65 g

**O2/R5****R5** Variations in the curls extending beyond the neckpiece.

- 27. SNG ANS 588 = Calciati, n. 2<sup>14</sup>

**O2/R6****R6** Variations in the curls extending beyond the neckpiece.

- 28. SNG ANS 589 = Calciati, n. 1/15

14. Contrary to Calciati's description, this specimen exhibits a small M below the neck truncation. The coin comes from the Sicily 1912-1913 Hoard (= IGCH 2147).

(At this point, there is an interruption in the coinage, which I believe is due to a lack of silver for coining rather than some obscure political or economic reason.)

## O4/R7

O4 First wingfeather shorter.

R7 Without dot, and with two curls beyond the neckpiece.

- 29. SNG ANS 590 = SNG Berry 783, 8.58 g = Calciati, n. 1/3
- 30. BMC Corinth, 8.55 g = Calciati n. 1/5
- 31. M&M 26, 7 Nov. 1974, n. 55, 8.65 g
- 32. Budapest, Dessewffy, n. 2366, 8.4 g
- 33. Hess-Leu 6-7, 1966, n. 82, 8.54 g<sup>15</sup>
- 34. Gorny & Mosch 151, 2006, n. 72, 8.71 g

## O4/R8

R8 Variations in the curls extending beyond the neckpiece.

- 35. Frankfurter Münz. 116, Jan. 1969, n. 393, 8.6 g = Kricheldorf 23, Sept. 1963, n. 82, 8.56 g = Kricheldorf, 1-2 July 1966, n. 95
- 36. Kunst und Münzen XVI, n. 95 = Calciati, n. 1
- 37. NFA 1987, n. 25 = Calciati, n. 1/1
- 38. E. Sicily 1983, 8.569 g = Calciati, n. 1/2 = 702/1
- 39. Stack's, 17 May 1983, n. 56, 8.115 g
- 40. M&M Deutschland, 12, 2003, n. 79, 8.53 g = M&M Deutschland, 14, 2004, n. 367, 8.53 g

## O5/R8

O5 Variation in the orientation of the wingfeathers.

- 41. Kunst und Münzen V, 1981, n. 19 = Calciati, n. 1/6
- 42. J. Schulman, Fixed Price List 212, Winter 1977, n. 7, 8.50 g
- 43. M&M 72, 6 Oct. 1987, n. 502 = Sotheby's, 27-28 Oct. 1993, n. 185
- 44. E. Sicily 1983, 8.331 g = Calciati n. 1/7 = 703/1
- 45. Sternberg XX, 20 April 1988, n. 145, 8.65 g
- 46. Lanz 22, 10 May 1982, n. 50, 8.61 g
- 47. Kricheldorf 1963, n. 82
- 48. Kricheldorf 1966, n. 95
- 49. BMC Corinth 97/1
- 50. Dresden

## O6/R7

O6 First and the fifth wingfeathers are longer.

- 51. SNG Oxford 1572, 8.29 g = Calciati, n. 1/4
- 52. Oxford, Nat. Mus. of Wales Loan 1968, n. 220, 8.53 g

15. Also listed in A. Erdogan, *Antik grek sikkeleri katalogu* (Istanbul, 1980), n. 783.

53. Campana Coll., 8.78 g<sup>16</sup> = Calciati, n. 2/2<sup>17</sup>

54. Gemini II, 2006, n. 83, 8.74 g

#### O6/R8

R8 Variation in the position of the M, upward and to the left of the helmet.

55. SNG Fitzwilliam 1836, gr. 8,10

#### O6/R9

R9 Variations in the curls extending beyond the neckpiece.

56. SNG Oxford 1573 = Calciati, n. 2/5<sup>18</sup>

### Group III

*Obverse:* ME ligate/ *Reverse:* no letter

#### O7/R9

O7 In addition to the ME (ligate), this die has the first wing feather curved and long and, unlike the preceding, shows a slight cut in the left rear leg of Pegasus.

57. SNG Oxford 1574, 8.93 g = Calciati, n. 3/2

58. CNG, Mail Bid sale 76, 2007, n. 100, 8.59 g. (This issue is extremely important, because it links Group III with Group II and indirectly confirms the die sequence at this crucial point.)

#### O7/R10

R10 A variation of the preceding.

59. Kricheldorf, 19–21 Feb. 1973, n. 75

60. SNG Cop. 1899, 8.68 = Calciati, n. 5

#### O7/R11

R11 Again, a variation of the preceding.

61. Grose, n. 1838, 8.36 g = Calciati, n. 3/3

62. Stack's, 5–6 March 1971, n. 221, 8.66 g

63. Weber, n. 1096 = Calciati, n. 3/1

64. Sambon Canessa, Dec. 1902, n. 70, 8.68 g

65. E. Sicily 1983, 8.311 g = Calciati, n. 3/5 = 706/3

66. SNG Fitzwilliam 1838, 8.36 g

67. Wien, n. 13372, 8.27 g

68. Berlin, Imhoof Blumer 1900, 8.55 g

69. BMC Corinth 97/2, 8.74 g

70. Hirsch 1922, n. 180, 8.92 g

16. Letter from Prof. Campana, March 16, 1986.

17. Where the weight is given as 8.45 g.

18. The letter below the neck truncation is partially visible.

## O8/R11

O8 Different die with wing feathers variously oriented, and lacking the gap in the left rear leg.

71. Naville 1922, Evans Coll., n. 180, 8.92 g

## O9/R11

O9 The gap in the rear leg is faint and the wing feathers are variously oriented.

72. SNG Lloyd 658, 8.51 g = Calciati, n. 3

## Group IV

*Obverse: ME ligate/ Reverse: M.*

## O9/R12

R12 This die is very similar to R11 but has the letter M below the neck truncation. The linkage to Group III is based on a coin in the British Museum.

73. BMC Corinth 11, 8.74 g

72 bis. Spink 1958, 8.58 g<sup>19</sup>

(At this point, there is a second interruption in the sequence, perhaps filled by the following example.)

74. Classical Numismatic Auctions, Quarryville, Penn., II, 7 Nov. 1987, n. 23

## O10/R13

O10 Wing feathers variously oriented.

R13 Different profile and small die break in upper right field.

75. Adolph Hess 18, March 1918, n. 582, 8.44 g = Ratto, Lugano, 4 April 1927, n. 315, 8.40 g

## O10/R13

O11 Wing feathers arranged differently than preceding.

76. Hirsch XXI, n. 1826 = Weber, 1908

## O12/R13

R13 Die break along nose of Athena more pronounced than on preceding.

O12 Very different style of Pegasus, first wing feather very short and ME very faint.

77. Bank Leu & Co., Dec. 1961, n. 94, 8.59 g = Attianese,<sup>20</sup> n. 522 = Calciati, n. 1/8<sup>21</sup>

78. E. Sicily 1983, 8.512 g = Calciati, n. 4 = 707/4

19. Cast in the Ashmolean Museum recorded on my visit in 1986, in a box labeled "Corinth Misc."

20. P. Attianese, *Calabria Greca: Greek coins of Calabria*, vol. 1 (Santa Severina, 1974).

21. Calciati has inexplicably placed this coin out of sequence, and Attianese was apparently unaware of the presence of the small M on the reverse of the coin he illustrated.



- 79. BMC Corinth 8.62 = Calciati, n. 4/1
- 80. Campana 8.59 g. = Calciati, n. 5/1<sup>22</sup>
- 81. Gorny & Mosch 142, 2005, n. 1124, 8.61 g

### Group V

*Obverse:* MK ligate / *Reverse:* no letter.

#### O<sub>13</sub>/R<sub>13</sub>

O<sub>13</sub> Monogram interpreted as AK.

- 82. E. Sicily 1983, 8.414 = Calciati, n. 7 = 709/7
- 83. SNG, Lockett 1841, 8.66 g, partially double struck
- 84. Berlin n. 72/1888. The coin has been attributed to the Lucani, reading the monogram as Λ and K. However, upon closer examination, the coin may be attributed to Medma, since the epsilon is quasi-lunate and is placed next to a very narrow MI.<sup>23</sup>

#### O<sub>13</sub>/R<sub>14</sub>

R<sub>14</sub> Identical die to R<sub>13</sub>, except lacking M.

- 85. SNG ANS 586, 8.13 g = Calciati, n. 6/1
- 86. E. Sicily 1983, 8.268 g = Calciati, n. 6 = 708/6
- 87. Numismatica Ars Classica, Auction P, 2005, n. 1116, 8.62 g

#### O<sub>13</sub>/R<sub>15</sub>

R<sub>15</sub> Variation of the preceding.

- 88. BM, London, 8.50 g. = Calciati, n. 6/2.

### Group VI

Barbarous coin, probably not belonging to Medma on stylistic grounds.

- 89. J. Schulman 210, 1975, n. 26. Obverse similar to O<sub>1</sub>, but the reverse without legend and of aberrant style, with traces of a symbol to the right and beneath the neck of Athena.

22. The coin is extremely important in that it marks the transition between Group IV and Group V with a very clear die, as the reverse (R<sub>13</sub>) is the same. The weight of the two Medma staters from the Campana collection was kindly provided by Prof. Campana.

23. Cf. G. Gorini, "Per uno studio della monetazione di Medma," *Numismatica e Antichità Classiche* 14 (1985), 127-140, esp. 135, n. 39; and M. Taliercio Mensitieri, "Problemi monetari di Hipponium e delle città della Brettia tra IV e III sec. a.C.," in *Crotone e la sua storia tra IV e III secolo a. C.* (Naples, 1993), 131-186, esp. 174-175, referring to this coin but dating it to the reign of Agathocles.

## CONCLUSIONS

Altogether, we have thirteen obverse and fifteen reverse dies, with an average of 6.69 specimens per die, from which (without becoming involved in the debate regarding the relationship between the size of an issue and the number of dies used to produce it),<sup>24</sup> we can conclude, based on the evidence presented, that the coinage of Medma was of short duration and modest in size. We have assembled some ninety examples of the Medma coinage and, although it may be possible to increase this number slightly, we have included the specimens from most important public and private collections, as well as from many auction and fixed price catalogues.

I therefore conclude that this sporadic emission of staters represents the contribution of this Locrian colony to the Italian cause at the moment of the Timoleontic renaissance and before the final capture of Medma by the Bruttii, which restricts the Corinthian types to the period from 330–317 BC. This parallels the similar emission of Locri, which at that point resumes Syracusan types and therefore belongs to Taliercio's Group C1.<sup>25</sup>

## ACKNOWLEDGEMENTS

This paper, which has been in progress for some time, owes its existence to a fortuitous suggestion made some thirty years ago by my friend Salvatore Settis, to whom I offer my appreciation and my apologies for the long delay. However, my ongoing commitments, first to the Museo Civico di Padova and subsequently as

24. Cf. most recently S. E. Buttrely and T. V. Buttrely, "Calculating ancient coin production, again. Reviewing de Callatay, Depeyrot, and Villaronga, *L'Argent monnayé d'Alexandre le grand à Auguste*, and de Callatay, *Calculating ancient coin production: seeking a balance*," *American Journal of Numismatics* 9 (1997), 113–135.

25. Cf. M. Taliercio and E. Spagnoli, "Presenza monetale di Corinto e colonie in Sicilia e in Magna Grecia nel IV e III secolo a.C." in *La monetazione corinzia in Occidente*, Atti del IX Convegno del Centro Internazionale di Studi Numismatici. Naples, 27–28 Oct. 1986 (Rome, 1993), 87–293, esp. 104, 105, 112, 120; M. Taliercio, *Le emissioni monetarie della Calabria dall'età di Dionigi II a quella di Annibale*, in *Storia della Calabria antica. Età italica e romana*, ed. S. Settis (Rome 1994), 2, 423–436, esp. 425–426, with the proper reference to a "direttrice sicelioto-siracusana, per ora limitata a Locri, sulla cui scia si pone significativamente Medma"; previously demonstrated by S. Garraffo, *Le riconiazioni in Magna Grecia e in Sicilia* (Palermo, 1984), where he asserts that the trade relationships of the cities of Locri, Medma, and Hipponio "erano prevalentemente orientati con il mondo siceliota più che con la Magna Grecia propria" (159).

the director of the department of scienze dell'antichità of the Università di Padova (now the department of archeology), have prevented the prompt completion of this research, as I would have liked. In the meantime, I have presented my research at the Berlin International Numismatic Congress in 1997, although I was unable to publish the article in the *Proceedings*. However, a short summary of my paper was recorded (N. K. Rutter, ed., *Historia Numorum*<sup>3</sup>, Italy [London, 2001], 183).

My thanks to the many individuals whose help has facilitated my work, primarily the curators and others responsible for public numismatic collections, especially Carmen Arnold-Biucchi and William Metcalf formerly of the American Numismatic Society; during the summer of 1994, I served as visiting scholar for the ANS Graduate Seminar, which provided access to the trays and library of the ANS. A special appreciation to Marina Taliercio, who read the draft and provided useful suggestions; to Rick Witschonke of the ANS, who has supplied the English translation and provided comments as well; and to Peter van Alfen, for support and advice.

## A fourth century BCE hoard from the Near East

PLATES 47–58

LISA ANDERSON\* AND PETER G. VAN ALFEN\*\*

This article presents a hoard of 475 coins, mostly Athenian owls, found in the Near East that was buried between 334 and 330 BCE. Included in the study is an analysis of the later fourth-century Athenian weight standard.

In 2006, the American Numismatic Society received a donation of 313 Athenian-type tetradrachms that was augmented in 2008 by an additional gift of 120 Athenian-type tetradrachms, including Athenian imitations from Egypt and the Levant, plus 36 additional coins minted in or by Sinope, Amisos, unnamed Persian satrap(s), Mausolus of Caria, Aspendos, Tarsus, Issos, Sidon, and Tyre. The 469 coins of the two donations (accession numbers 2006.12.1–313 and 2008.15.1–156), and six Athenian tetradrachms not donated to the Society (here R1–R6), are said to have come from the same hoard. Although nothing absolute is known about its provenience or its find date, the hoard was reportedly found nearly twenty years ago somewhere in the region of northern Syria.<sup>1</sup> The general

\*Lisa\_M\_Anderson@brown.edu

\*\*vanalfen@numismatics.org.

1. By “northern Syria” we mean the general region where the modern states of Turkey, Syria and Iraq intersect. There is no information associated with the hoard, or that can be derived from the hoard itself, to indicate more specifically in which modern state’s territory the hoard was found. It is lamentable that with the loss of its exact provenience and circumstances of its discovery this hoard cannot provide an archaeologically datable context, hints about circumstances of deposit, or anything beyond the information derived from the coins themselves.

composition of the hoard and the prevalence of cuts, countermarks, and graffiti support a Near Eastern provenance, whereas the general consistency of preservation and patina support the claim that all the coins were found together. As will be seen, this hoard, which we have designated "ANS Near East," was likely deposited between 334 and 330 BCE, a key period of political and economic transition in Persian territories.

Over 90% of the coins from the hoard are Athenian-style tetradrachms ("owls"), a preponderance of owls that is paralleled by other Near Eastern hoards of the later fourth century.<sup>2</sup> Within the mix of owls are *bona fide* Athenian products that span a chronological range from the later fifth century to the last decades of the fourth century, and (un)marked Near Eastern imitations. The most numerous single type of coin in the hoard are *bona fide* Athenian *pi*-style owls of the later fourth century, comprising 360 coins or c. 75% of the total number of coins.

This study is divided into four parts: the first section presents a description of the hoard coins and their dating; the second section offers an analysis of the cuts, countermarks, and graffiti found on the coins; the third section offers a wider study of the weights of *pi*-style owls that encompasses 1063 owls from this hoard and from other hoards found in the Aegean and Near East; the last section presents our general conclusions.

## I. DESCRIPTION OF THE HOARD

The 475 coins from the hoard are all larger denomination silver issues, most of which date from the third quarter of the fourth century BCE. We have placed the coins into two broad groups, non-Athenian types, which are discussed first in a general west-to-east geographical sequence, and Athenian types.

### I.A: Non-Athenian type coinage

#### *Paphlagonia, Sinope, AR drachm*

*Obv.*: Head of Sinope, l., wearing necklace and earrings; border of dots

*Rev.*: Eagle l., carrying dolphin; below and at r., legends in Greek and Aramaic

1. 4.78 g; 6:00; *obv.* 1 cut; in field r., ΘΕΟΤ(Ι); below, ΣΙΝΩ (ANS 2008.15.1)
2. 4.49 g; 3:00; Aramaic inscription partially off flan, 'ARYWRT? (ANS 2008.15.2)
3. 5.06 g; 2:00; *rev.* 1 cut; Aramaic 'ARYWRT (ANS 2008.15.3)

2. See, for example, the 1973 Iraq hoard (van Alfen 2000), the 1989 Syria hoard (van Alfen 2002a), and the 2004 owl and bullion hoard (van Alfen 2004/5b).

Two of the Sinopian coins (nos. 2 and 3) have Aramaic legends naming the issuer, 'ARYWRT (Ariarathes) on no. 3, who is possibly the issuer of no. 2 as well. The Persian dynast Ariarathes, who ruled in Paphlagonia from c. 345 to 322 BCE, issued the bulk of his coinage between c. 330 and 322 BCE (Harrison 1982a: 166; 288–90). Although Newell (1931: 21–22) expressed doubts about being able to locate where in Paphlagonia these Aramaic inscribed coins were minted, Harrison (1982a: 266–290; 1982b) considers Sinope as the likeliest mint for this series and three other series of Sinopean imitations with Aramaic legends. Without a full study of the fourth century coinage of Sinope the question must remain open, however. The placement of no. 1 within the Sinopean series would also benefit from such a study. The legend ΘΕΟΤΙ is well known, but the issues of this magistrate are not yet dated. Four coins with the legend ΘΕΟΤΙ appeared in the Küchük Köhne hoard of c. 325–320 BCE (IGCH 1394; Newell 1931: nos. 9–12), which offers a *terminus ante quem* for this magistrate. Significantly, the weights of all three of these coins are well below the ideal of c. 6.0 g for Sinopean drachms but are closer to the siglos (?) standard of c. 5.1 g that Newell (1931: 22–23) proposed for the issues of Ariarathes.

*Pontus, Amisos, AR drachm (imitation?)*

*Obv.*: Female head l. wearing turreted crown; border of dots

*Rev.*: Owl with wings spread facing and perched upon a shield; symbol in r. field

4. 5.12 g; 4:00; obv. 1 cut (ANS 2008.15.4)

The style, misshapen symbol on the reverse, and lack of a magistrate's inscription suggest that this coin is an imitation of the drachms produced at Amisos throughout the fourth century. Although Wroth (1889: 13) and Newell (1931: 7) affirm a distinction between drachms produced before 360 BCE and those after, this coin does not replicate the style of either series to an exact degree.

*Uncertain mint in Asia Minor, Royal Achaemenid Issues (?), AR (Chian) tetradrachm*

*Obv.*: Persian king kneeling r., drawing bow; border of dots

*Rev.*: Horseman r.; border of dots

5. 14.85 g; 6:00; rev. 2 cuts (ANS 2008.15.5)

6. 14.91 g; 7:00; rev. 2 cuts (ANS 2008.15.6)

7. 14.97 g; 7:00; rev. 1 cut (ANS 2008.15.7)

8. 15.05 g; 5:00; obv. 2 cuts (ANS 2008.15.8)

9. 14.71 g; 11:00; obv. 1 cut (controlmarks rev.—'o' in field l.; under horse, dolphin) (ANS 2008.15.9)

These five new coins of this enigmatic series offer little more of substance to Andrew Meadows's (2002) analysis of the two dozen or so examples from the Pixodaros hoard (*CH* 9. 421). As Meadows predicted, the discovery of new coins has increased the total number of known dies; none of the examples here are linked to one another or to those from the Pixodaros hoard, thus reaffirming the arguments that this series was not an emergency or expeditionary coinage, but served more general purposes. Based on the Pixodarus hoard, Meadows tentatively dated those coins without controlmarks to before c. 341 BCE and those with controlmarks to sometime after. The relative wear of nos. 5–8 compared to our single coin with control marks, no. 9, could indicate that these coins had been in circulation longer, but this is only speculation.

*Caria, Hekatomnid dynasty, Mausolus, AR tetradrachm*

*Obv.*: Head of Apollo facing

*Rev.*: Zeus Labraundos standing r.; ΜΑΥΣΣΩΛΛΟΣ

10. 15.02 g; 11:00; obv. 2 cuts (ANS 2008.15.10)

Mausolus, who reigned in Caria and Lycia from 377/6–353/2 BCE, produced a healthy stream of coinage during his tenure. Koray Konuk's die study of the Hekatomnid dynasts identified 73 obverse dies for this series of Mausolus tetradrachms. We await the publication of this study in order to locate our coin within the series.

*Pamphylia, Aspendos, AR stater*

*Obv.*: Two wrestlers

*Rev.*: Slinger standing r., in square border; triskeles in field r.; at l., downward, ΕΣΤΦΕΔΙΙΥΣ

11. 10.69 g; 11:00; MA (or MΛ) between wrestlers (ANS 2008.15.11)

12. 10.80 g; 11:00; obv. 2 cuts (ANS 2008.15.12)

Oğuz Tekin's (2000: 165–167) dating of the staters of Aspendos, which is based on the stance of the wrestlers among other things, places both of these coins firmly within the fourth series, c. 380/75–330/25 BCE. The relative wear of the coins, of no. 11 particularly, could indicate that these coins belong to a date earlier rather than later within the range of dates offered by Tekin.

*Cilicia, Tarsus under Mazday (Mazaïos), AR staters*

*Casabonne (2004): Series I, group B*

*Obv.*: Baal of Tarsus throned l., wheat over grapes in r. hand, staff in l.; at r.

upward, *B'LTRZ* in Aramaic; linear border

*Rev.*: Lion attacking stag to l.; *MZDY* above in Aramaic, *mem* below; square border of dots

13. 10.52 g; 12:00; rev. 2 cuts (ANS 2008.15.13)

14. 10.64 g; 10:00; obv. 1 cut; rev. graffito "X" (ANS 2008.15.14)

15. 10.70 g; 8:00; rev. 2 cuts (ANS 2008.15.15)

*Casabonne (2004): Series I, group C*

*Obv.*: Baal of Tarsus throned l., wheat over grapes in r. hand, staff in l.; at r. upward, *B'LTRZ* in Aramaic; symbol below throne; border of dots

*Rev.*: Lion attacking stag; *MZDY* above in Aramaic, *mem* below; linear border

16. 10.25 g; 11:00; rev. 2 cuts (ANS 2008.15.16)

*Casabonne (2004): Series II, group A*

*Obv.*: Baal of Tarsus throned l., wheat over grapes in r. hand, staff in l.; at r. upward, *B'LTRZ* in Aramaic; various letters and symbols below throne and in l. field; border of dots

*Rev.*: Lion attacking bull to l.; *MZDY* above in Aramaic, *samek mem* below; linear border

17. 10.46 g; 10:00; rev. 1 cut (illegible under throne) (ANS 2008.15.17)

18. 10.48 g; 9:00; no marks (*mem resh* at l. in Aramaic and Phoenician) (ANS 2008.15.18)

19. 10.61 g; 6:00; rev. 1 cut (*mem* under throne, *nun tau*) (ANS 2008.15.19)

20. 10.62 g; 3:00; rev. 3 cuts (illegible under throne; *ayin* at l.) (ANS 2008.15.20)

*Casabonne (2004): Series II, group B*

*Obv.*: Baal of Tarsus throned l., wheat over grapes in r. hand, staff in l.; at r. upward, *B'LTRZ* in Aramaic; below throne, *mem*; to l., *resh*; border of dots

*Rev.*: Lion attacking bull to l.; *MZDY* above in Aramaic; linear border

21. 10.72 g; 1:00; rev. 3 cuts (ANS 2008.15.21)

*Casabonne (2004): Series II, group D*

*Obv.*: Baal of Tarsus throned l., wheat over grapes in r. hand, staff in l.; at r. upward, *B'LTRZ* in Aramaic; to l., *nun tau*?; border of dots

*Rev.*: Lion attacking bull to l.; *MZDY* above in Aramaic; border of dots

22. 10.85 g; 8:00; obv. 4 cuts (ANS 2008.15.22)



*Casabonne (2004): Series IV*

*Obv.*: Baal of Tarsus throned l., holding staff in r. hand; at l., grape bunch and Phoenician *resh*; at r. upward, *B'LTRZ* in Aramaic

*Rev.*: Lion attacking bull over city walls; above in Aramaic, *MZDY ZY 'L 'BRNHR' W HLK*; border of dots

23. 10.62 g; 9:00 (ANS 2008.15.23)

While it is clear that the Persian nobleman Mazday (Mazaios in Greek) was responsible for issuing a large volume of coinage from Tarsus in the third quarter of the fourth century BCE, less clear are the dates of his rule and the chronology of the several series of his coinage. At some point between c. 361 and 345 BCE, Mazday assumed satrapal powers in Tarsus and retained power until sometime around the Macedonians' onslaught towards Persia (Casabonne 2004: 207–210). All of Mazday's Tarsian issues are likely dated before the battle of Issos (333 BCE), by which time he had left Tarsus to undertake other responsibilities farther east. Casabonne's (2004: 211–215) arrangement of the Tarsian issues into six series does not necessarily reflect the order in which the coins were issued, a matter that remains unresolved.

*Transeuphratene, Issos under Mazday, AR shekel*

*Obv.*: Baal of Tarsus type throned, l., holding staff in r. hand; at l., incense burner; at r. upward, *B'LDGN* in Aramaic; linear border

*Rev.*: Lion walking r.; above in Aramaic *MZDY*; above and to r., symbol; *beth* below; border of dots

24. 7.18 g; 11:00; obv. 1 cut (ANS 2008.15.24)

Van Alfen (2008; this volume) argues that this coin is one of two known from a series issued by Mazday at Issos in the third quarter of the fourth century BCE.

*Phoenicia, Sidon under Mazday (and Evagoras), AR double shekels*

*Obv.*: Galley with oars over stylized waves; border of dots

*Rev.*: Chariot l., with driver and king; servant behind; *MZDY* within curve upper l.; border of dots

25. 25.51 g; 11:00; rev. 1 cut (Elayi and Elayi 2004a, obv. die D10?) (ANS 2008.15.25)

26. 24.83 g; 1:00; rev. 2 cuts (ANS 2008.15.26)

27. 25.31 g; 12:00 (Elayi and Elayi 2004a, rev. die R5) (ANS 2008.15.27)

28. 25.68 g; 1:00; obv. graffito; rev. 1 cut (*beth* 20 above galley)(dies not in Elayi and Elayi 2004a) (ANS 2008.15.28)

*Obv.*: Galley with oars over stylized waves; border of dots

*Rev.*: Chariot l., with driver and king; servant behind; *ayin*, *ayin* within curve upper l.; border of dots

29. 25. 77 g; 12:00 (rev. die R4, Elayi and Elayi 2004a) (2008. 15. 29)

Four of the five Sidonian coins in the hoard were issued under Mazday (Mazaïos), under whose oversight the Sidonian mint produced dated coins between c. 353 and 333 BCE (Elayi and Elayi 2004a: 660–664). No. 28 offers an unproblematic reading of the date “year 20” (334 BCE; Elayi and Elayi 2004b: 162), a coin which also presents new dies for Elayi and Elayi’s (2004a) series IV. 6. 1. m. The obverse of no. 27 is obscured, but the reverse die is linked to Elayi and Elayi (2004a) no. 1631, a coin from year 1; both of the other two Mazday coins are too worn to offer evidence for dating. Nestled within Mazday’s issues is a series represented here by no. 29 that was issued between 346–343 BCE under the Cypriot Evagoras during Sidon’s revolt from Persian hegemony (Elayi and Elayi 2004b: 161).

*Phoenicia, Tyre, AR shekels*

*Obv.*: Sea deity on a hippocampus r., drawing bow, over waves with dolphin; border of dots

*Rev.*: Horned owl standing r., head facing, with crook and flail; year in field r.; border of dots

*Betlyon (1982) fifth series (357–355 BCE)*

30. 9.27 g; 11:00; rev. 2 cuts (year 3; *mem* in field lower r. ) (ANS 2008.15.30)

*Betlyon (1982) sixth series (c. 355/54–352/51 BCE)*

31. 8.78 g; 12:00; obv. 1 cut (year 3) (ANS 2008.15.31)

32. 8.52 g; 11:00; obv. 2 cuts and 1 square punch, rev. one cut (year 4; *sade* in field lower r. ) (ANS 2008.15.32)

*Betlyon (1982) seventh series (c. 347–332 BCE)*

33. 8.63 g; 1:00; obv. 1 shallow cut, rev. 1 shallow cut (year 3) (ANS 2008.15.33)

34. 8.74 g; 12:00 (year 3?) (ANS 2008.15.34)

35. 8.51 g; 12:00; obv. 2 cuts (ANS 2008.15.35)

36. 8.66 g; 1:00 (year 15) (ANS 2008.15.36)

Three of John Betlyon’s (1982) seven series of Persian-period Tyrian issues are represented in the hoard. Nos. 33–34, which are from the last (seventh) series minted under ‘Uzzimilk, c. (349)/347–332 BCE, are dated to 346, 340, and 334 BCE.

## I.B: Athenian-type coinage

As is typical of Near Eastern hoards of the fourth century BCE, this hoard contains a mix of *bona fide* Athenian issues and their imitations, which were produced in various locales in the Levant and Egypt. “Marked” imitations are those that bear symbols or inscriptions that potentially indicate where the coins were struck and under whose authority; “unmarked” imitations are those that bear no such marks but are not *bona fide* Athenian products.<sup>3</sup>

## I.B.1: Marked Imitative Owls

*Asia Minor?*, *AR tetradrachms*

*Obv.*: Helmeted Athena r.

*Rev.*: Owl standing r., olive branch and moon behind; symbol in lower r. field

37. 17.31 g; 9:00; obv. 1 cut, rev. 1 cut (sphinx symbol) (ANS 2008.15.37)

38. 17.18 g; 6:00; rev. 1 cut (Phrygian helmet symbol) (ANS 2008.15.38)

Wolfram Weiser’s (1989) study presented a corpus of similar owls with elaborately engraved devices or symbols in the lower right field of the reverse. The symbols identified by Weiser include a bearded head in profile, a crowned male head in profile, a facing lion’s head, and a bucranium. Weiser argued that these owls were issued under Kyros the Younger at Sardis as the prince initiated his bid for the Persian throne at the end of the fifth century. Nos. 37 and 38 offer new symbols for Weiser’s corpus, a crowned sphinx and a Phrygian helmet, both in profile. At first glance both coins might appear to be previously unrecorded specimens from the same series; a closer look reveals, however, that no. 38 is stylistically unrelated to no. 37 and to Weiser’s owls. Weiser’s owls and no. 37 are based on later fifth century Athenian types (with profile eye), no. 38 instead takes its cues from the later fourth century Athenian *pi*-style series (see below). Wartenberg (1998: 51) published an owl with Phrygian helmet symbol that, while it is not die-linked to our example, is also of a later fourth century style; she suggested a date of c. 330 BCE but was not willing to suggest an attribution. If indeed both of these owls were minted in the same location, which is in no way certain, the change in style might attest to the longevity of this series of imitative owls.

Weiser’s arguments for locating the mint in western Asia Minor are mostly circumstantial; no evidence yet unequivocally ties these owls with symbols to any one minting locale, which could just as likely be in eastern as in western Asia Minor, or even in the Levant. However, a Persian context seems likely due to the

3. For further explication on the terminology and problems of ancient imitative coinage see van Alfen (2005).



nature of some of the symbols involved.<sup>4</sup> The Phrygian helmet and sphinx appear as both types and symbols on other eastern coinages, notably from areas around Cilicia and the Levant.<sup>5</sup> Two other owls with symbols unknown to Weiser also exist, both with fifth century type obverses: one in a private U.S. collection featuring an unfortunately worn and uncertain symbol but one that is not shaped like those already recorded (above), and another owl recently appearing in a *Numismatica Ars Classica* sale (NAC 46, April 2008, lot 296) featuring a bull's head in profile.<sup>6</sup>

*Egypt, Memphis (?) under Artaxerxes III, AR tetradrachms (?)*

*Obv.:* Helmeted Athena to r.

*Rev.:* Owl standing r., olive branch and moon behind; (Demotic) inscription upwards r.; (Aramaic) inscription in lower or upper l. field

*Van Alfen (2002a) Type III*

39. 16.76 g; 8:00; rev. 1 cut (O7/new die) (ANS 2008.15.39)

40. 16.96 g; 9:00; rev. 1 cut (O9/new die) (ANS 2008.15.40)

41. 16.50 g; 9:00 (new die/new die) (ANS 2008.15.41)

*Van Alfen (2002a) Type IVa*

42. 16.77 g; 7:00; rev. 1 cut (new die/new die) illegible Aramaic? in field l. and r.) (ANS 2008.15.42)

43. 16.94 g; 8:00; rev. 1 cut and 1 countermark? (obv. same die as no. 42/new die) (ANS 2008.15.43)

4. Meshorer (SNG ANS 6, no. 2), for example, attributed to either Tyre or Gaza Weiser's pl. XVI, no. 8, a coin in the ANS collection (ANS 1971.196.3) featuring a facing lion's head as the symbol on the reverse.

5. The Phrygian helmet symbol, for example, appears as an ancillary device on fourth century staters of Aspendos (e.g., CNG 30 1994, lot 180; Hess Divo 307 2007, lot 1283), while a similar sphinx appears as a type on the fourth century bronze coinage of Kaunos (e.g., Lanz 131 2007, lot 173); silver fractions of Cilicia (? e.g., CNG mail bid 73 2006, lot 414), Samaria (Meshorer and Qedar 1999: 87, no. 24), and Philistia (Gitler and Tal 2006: 184, no. XIII. 14D). Also see Gitler and Tal (2006: 165-175) for a range of Philistian issues, mostly small fractional silver issues imitating Athenian coinage, with a variety of symbols in fields on the reverse.

6. The coin, in the David Wray collection, weighs 16.34 g and has a 10:00 die axis.

*Van Alfen (2002a) Type IVb*

44. 16.89 g; 8:00; obv. 1 countermark, rev. 1 cut (new die/new die) (ANS 2008.15.44)

Van Alfen (2002a: 24–27) produced a corpus of the seventeen examples of this series known after the 1989 Syria hoard (*CH* 8. 158) came to light. The new hoard adds an additional six examples, which include four new obverse dies (nos. 41–44) and six new reverse dies (nos. 39–44). The obverses of nos. 42 and 43 are die linked; the obverses of nos. 39 and 40 are die linked to van Alfen (2002a) nos. 7 and 9 (O7 and O9 respectively).

While the addition of four new obverse and six new reverse dies to the corpus indicates that this series was sizeable, no new information is shed on the sometimes illegible inscriptions on the reverse of the coins. François Gaudard (pers. com.) notes that the Demotic inscriptions on the type III coins (nos. 39–41) represent two variants or styles—B1 and B2—of the Persian king Artaxerxes' name, B1 being the abbreviated version.<sup>7</sup> The new examples of type IV coins (nos. 42–44), unfortunately, offer no new readings of the legends on types IVa–c, which being neither recognizably Demotic nor Aramaic remain indecipherable to specialists (Vleeming 2001: 1).

## I.B.2: Unmarked Imitative Owls

The following owls are unmarked imitations produced somewhere in the eastern Mediterranean, possibly in the Levant:

*Obv.*: Helmeted Athena r.

*Rev.*: Owl standing r., olive branch and moon behind

45. 16.65 g; 8:00; obv. 1 cut (ANS 2006.12.16)  
 46. 16.92 g; 6:00; rev. 1 cut (ANS 2006.12.46)  
 47. 17.00 g; 7:00; rev. 1 cut (ANS 2008.15.45)  
 48. 16.35 g; 10:00 (ANS 2006.12.35)  
 49. 16.79 g; 9:00; rev. 1 cut (ANS 2006.12.36)  
 50. 16.98 g; 9:00; obv. 1 cut, 1 ctmk; rev. 2 cuts (ANS 2006.12.45)  
 51. 16.31 g; 9:00 (ANS 2006.12.49)  
 52. 16.52 g; 1:00; rev. 2 cuts (ANS 2006.12.50)  
 53. 16.72 g; 7:00 (ANS 2008.15.46)  
 54. 16.17 g; 10:00; obv. 1 ctmk; rev. 2 cuts, 3 ctmks (ANS 2008.15.47)

7. The name on B1 reads *Artkhtsh*: cf. Vleeming (2001) nos. 8, 9; van Alfen (2002) p. 26, nos. 7–8. The name on B2 reads *Artkhshtsh*: cf. Vleeming (2001) nos. 10; and in this hoard nos. 39 and 40.

More problematic are the following group of owls first identified by Theodore Buttrety (1982, 1984) in two brief papers a quarter-century ago. Buttrety contended that his types B, X, and M were not products of Athens, but rather imitations produced in Egypt. In a series of more recent papers and in his monograph, Christophe Flament (2003, 2004, 2005, 2007) has challenged this attribution, reattributing the coins to Athens. Flament's arguments are as follows. Their clearly unusual style is due to the use of engravers with lesser talent than those normally employed (2003: 7), an exigency brought on by the difficulties the Athenian faced in the aftermath of the Peloponessian War. Metal analysis indicates little difference between types B and M and earlier fifth century Athenian coins produced presumably with Laurion silver. Furthermore, the Piraeus hoard (CH 5. 15) would seem to confirm the Athenian origin of the coinage since the hoard contained, in addition to type B and M tetradrachms, drachms that are stylistically related to the larger coins. The presence of these drachms, Flament (2005) insists, nullifies any lingering suspicions of non-Athenian origin since such "small" denominations rarely travel far from their place of manufacture. He concludes that types B and M are *bona fide* issues produced at the end of the fifth century. For type X, we still await the full publication of Flament's arguments (cf. 2007: 123), but this too he assigns to Athens.

While Flament's arguments have merit, they are not conclusive. The recourse to expediency to explain sloppy or unusual styles has long been a favorite refuge for numismatists, but one that demands closer inspection. The Athenians did produce sloppy coins on occasion (e.g., Starr [1970], groups II and V; and many of the *pi*-style issues), perhaps because of pressures to produce more coins in a limited amount of time, but this was manifested more often in the quality of striking and flan production than the style of their die engraving. In their long minting history, the Athenians faced many dire moments but still managed to produce coins (e.g., the plated and gold issues of 406/5 BCE; Starr group II) that were of a style that was patently related to those that came before and after. This is simply not the case with types B and M (and X), which is why Buttrety marked them as imitations in the first place. In general, types B, M, and X are carefully produced coins with well-formed flans, consistent weights and die axes, that were made from well-engraved, but stylistically unusual dies. Despite Flament's protests (2005), such traits could just as well belong to imitative owls as to Athenian coinage, as we have seen with the Egyptian Artaxerxes series of imitations (nos. 39–44) and those with symbols on the reverse (nos. 37–38).

Nor are there fast rules that imitations need be of inferior, or even non-Athenian silver, and that they cannot circulate widely. The presence of the drachms in the Piraeus hoard might cause one to pause. But drachms still contained sufficiently high value to encourage their wider circulation and use far beyond their

point of origin, as hoard finds also show;<sup>8</sup> moreover a large number of imitative drachms were produced in the Levant (cf. Gitler and Tal 2006, *passim*). Who can say that these coins did not reach Athens in quantity?

For the moment, we remain cautiously unconvinced by Flament's arguments for assigning these coins to Athens and so prefer to keep them under the imitative rubric.<sup>9</sup> It is hoped that Carmen Arnold-Biucchi's forthcoming publication of the University of Michigan hoard, which was the object of Buttrey's initial observations, will help to resolve many of the problems associated with this series.

*Obv.*: Helmeted Athena r.

*Rev.*: Owl standing r., olive branch and moon behind

*Buttrey type B*

55. 16.60 g; 7:00; obv. 1 cut, 1 ctmk; rev. 2 cuts, 1 ctmk (ANS 2006.12.12)

56. 16.18 g; 8:00; obv. 1 cut; rev. 2 ctmks (ANS 2006.12.13)

57. 16.85 g; 9:00; obv. 3 cuts (patterned); rev. 2 cuts, 1 ctmk, graffito (ANS 2006.12.18)

58. 16.64 g; 9:00; rev. 1 cut (ANS 2006.12.22)

*Buttrey type M*

59. 16.71 g; 8:00; rev. 2 cuts, 1 ctmk (ANS 2006.12.5)

60. 17.05 g; 9:00; obv. 1 cut, graffito; rev. 2 cuts (ANS 2006.12.6)

61. 16.53 g; 9:00; obv. 1 cut; rev. 3 cuts (ANS 2006.12.7)

62. 16.32 g; 2:00; obv. 1 cut; rev. 2 cuts, 1 punch (ANS 2006.12.19)

63. 16.35 g; 8:00 (ANS 2008.15.48)

64. 16.61 g; 9:00; rev. 3 cuts (ANS 2008.15.49)

65. 16.89 g; 10:00; obv. 4 cuts (patterned); rev. 3 cuts (ANS 2008.15.50)

8. As a case in point, the following archaic and classical period hoards found at a distance from Athens contain Athenian didrachms: *IGCH* 359, 1165, 1644, 1874; the following contain Athenian drachms, obols or their fractions: *IGCH* 423 (41 obols found in Bulgaria!); 1203, 1227, 1482, 1790; *CH* 8. 73, 9. 275. Note too that in many cases these hoards, and others, contain small denomination coinage of other far away mints. Controlled excavations at Mit Rahinah in Egypt in 1986 produced two tetradrachms and one drachm of Buttrey's type B, and four tetradrachms and two drachms of Buttrey's type M (see Flament 2007: 208). By Flament's same argument, the presence of these drachms at Mit Rahinah could justify a case for Egyptian manufacture!

9. Oeconomides (2006) likewise urges caution in her recent publication of a hoard found in Attica (1979 Ano Voula), which contained thirty Athenian type coins (twelve tetradrachms, seventeen drachms, and one triobol), including seven Buttrey type B and M tetradrachms.

*Buttrey type X*

66. 16.80 g; 9:00; obv. graffito; rev. 2 cuts (ANS 2006.12.32)

I.B.3: *Bona Fide* Athenian Owls

The majority of the coins found in this hoard are *bona fide* Athenian owls covering a time span of perhaps an entire century between the date of the earliest and latest issues. The coins fall into three broad categories, late fifth century, early fourth century, and *pi*-style owls.

## I.B.3.1 Late fifth Century Owls

The considerable wear found on most of the following coins underscore their long circulation, to which the numerous test cuts and countermarks found on the coins also attests. Many are sufficiently well enough preserved, however, to be identified as belonging to Flament's (2007: 79–91) group III, which he places between 420 and 405 BCE.

*Obv.*: Helmeted Athena r.

*Rev.*: Owl standing r., olive branch and moon behind

*Flament (2007) group III*

- 67. 16.51 g; 10:00; rev. 2 cuts (ANS 2006.12.1)
- 68. 16.75 g; 8:00; obv. 1 cut, 2 ctmks; rev. 2 cuts, 2 ctmks (ANS 2006.12.24)
- 69. 15.74 g; 8:00; rev. 2 cuts (ANS 2006.12.25)
- 70. 16.53 g; 9:00; rev. 2 cuts (ANS 2006.12.27)
- 71. 16.34 g; 9:00; rev. 1 cut (ANS 2006.12.28)
- 72. 16.81 g; 9:00; obv. 1 cut, 1 punch; rev. 2 cuts, 1 punch (ANS 2006.12.29)
- 73. 16.63 g; 9:00; obv. 1 cut; rev. 1 cut (ANS 2006.12.30)
- 74. 16.73 g; 9:00; obv. 1 cut; rev. 2 cuts (ANS 2006.12.31)
- 75. 16.37 g; 8:00; obv. 2 cuts; rev. 2 cuts (ANS 2006.12.37)
- 76. 16.59 g; 11:00; obv. 1 cut, 1 ctmk; rev. 1 cut (ANS 2008.15.51)
- 77. 16.06 g; 9:00; obv. 1 punch; rev. 1 cut (ANS 2008.15.52)

*Flament (2007) group III?*

- 78. 16.82 g; 9:00; obv. 1 punch; rev. 1 cut, 1 punch (ANS 2006.12.2)
- 79. 16.55 g; 9:00; obv. 1 ctmk; rev. 1 cut (ANS 2006.12.3)
- 80. 16.85 g; 9:00; rev. 2 cuts (ANS 2006.12.8)
- 81. 16.50 g; 6:00; obv. 1 cut; rev. 3 cuts, 1 punch (ANS 2006.12.9)
- 82. 16.70 g; 8:00; obv. 1 cut; rev. 3 cuts (ANS 2006.12.10)
- 83. 16.60 g; 9:00; obv. 1 ctmk; rev. 1 punch (ANS 2006.12.17)



- 84. 16.28 g; 9:00; obv. 2 cuts, 1 punch; 1 cut, 1 punch (ANS 2006.12.23)
- 85. 16.55 g; 9:00; rev. 1 cut (ANS 2008.15.53)
- 86. 16.58 g; 9:00; obv. 2 cut, 1 ctmk; rev. 2 cuts (ANS 2008.15.54)
- 87. 16.58 g; 8:00 (ANS 2008.15.55)

*Uncertain group*

- 88. 16.21 g; 9:00; rev. 1 cut, 1 ctmk, 1 punch (ANS 2006.12.4)
- 89. 16.89 g; 9:00; obv. 1 cut; rev. 3 cuts (ANS 2006.12.11)
- 90. 16.01 g; 9:00; rev. 1 cut, 1 ctmk (ANS 2006.12.14)
- 91. 15.88 g; 9:00; rev. 2 cuts (ANS 2006.12.15)
- 92. 16.39 g; 8:00; rev. 3 cuts (ANS 2006.12.20)
- 93. 16.68 g; 9:00; obv. 1 ctmk; rev. 3 cuts (ANS 2006.12.21)
- 94. 16.49 g; 9:00; obv. 2 ctmks; rev. 1 cut, 1 ctmk (ANS 2006.12.33)
- 95. 16.55 g; 9:00; obv. 1 ctmk; rev. 1 ctmk (ANS 2006.12.34)
- 96. 17.12 g; 8:00; obv. 1 cut; rev. 2 cuts (ANS 2006.12.40)
- 97. 16.8 g; 9:00; 1 cut, 1 ctmk; rev. 2 cuts, 1 punch (ANS 2006.12.42)
- 98. 16.68 g; 9:00 (ANS 2006.12.44)
- 99. 15.16 g; 10:00; rev. 2 cuts (ANS 2006.12.301)
- 100. 16.31 g; 9:00; obv. 1 cut, 1 ctmk; rev. 1 cut, 1 punch (ANS 2008.15.56)
- 101. 16.47 g; 9:00; obv. 1 cut, 1 punch; rev. 3 cuts, 2 punch (ANS 2008.15.57)
- 102. 16.92 g; 9:00; rev. 1 cut (ANS 2008.15.58)
- 103. 17.02 g; 9:00; rev. 2 cuts, 2 ctmks (ANS 2008.15.59)

I.B.3.2 Early Fourth-Century Owls

Hoard from Sicily (*IGCH* 2117; Nicolet-Pierre and Arnold-Biucchi 2000) and Egypt (*IGCH* 1663; Nicolet-Pierre 2004), as well as other finds in Attica (Kroll 2006), contain coins that are examples of early fourth century (c. 390 BCE) owls with subtle modernizations of the late fifth century types (cf. Flament 2007: 122). A dozen examples of this type were found in the hoard.

*Obv.*: Helmeted Athena to r.

*Rev.*: Owl standing r., olive branch and moon behind

- 104. 16.78 g; 9:00; rev. 3 cuts (ANS 2006.12.26)
- 105. 15.93 g; 8:00; rev. 3 cuts (ANS 2006.12.38)
- 106. 16.22 g; 10:00; rev. 2 cuts (ANS 2006.12.41)
- 107. 16.56 g; 9:00; obv. 1 cut, 1 punch; rev. 2 punch, 1 ctmk (ANS 2006.12.267)
- 108. 16.58 g; 9:00; 2 cuts on edge; obv. 1 punch (ANS 2008.15.60)
- 109. 16.31 g; 9:00; obv. 1 ctmk; rev. 1 cut, 1 ctmk (ANS 2008.15.61)
- 110. 16.77 g; 9:00; obv. 1 cut, 1 ctmk; rev. 1 cut, 2 ctmks (ANS 2008.15.62)

- 111. 16.60 g; 9:00; obv. 1 punch; rev. 1 punch (ANS 2008.15.63)
- 112. 16.66 g; 9:00; rev. 1 cut, 1 punch (ANS 2008.15.64)
- 113. 16.68 g; 9:00; rev. 2 cuts (ANS 2008.15.65)
- 114. 16.99 g; 9:00; obv. 1 cut; rev. 3 cuts (ANS 2008.15.66)
- 115. 17.10 g; 9:00; rev. 1 cut (ANS 2008.15.67)

### I.B.3.3 *Pi*-style Owls

The largest group of coins from the hoard are the 360 *pi*-style owls (nos. 116–469, R1–R6); their catalogue can be found in Appendix 1. Because of space considerations, not all of the *pi*-style owls are illustrated, but only those coins specifically mentioned in what follows. A complete photographic record of the hoard, including all of the *pi*-style owls, can be found on the American Numismatic Society's digital publications website ([www.numismatics.org/dpubs/](http://www.numismatics.org/dpubs/)).

In the later fourth century the Athenians produced massive quantities of tetradrachms in an updated style featuring a *pi*-like floral element on Athena's helmet and a consistently lowered *alpha* (no longer touching the owl at eye level) of the reverse legend. This new flood of coinage appears to be tied to and may have started when the Athenians were making major fiscal reforms under Eubolus's leadership (355–342 BCE). This might have included an extensive recall and recoinage of all available silver in Attica (Kroll 2006: 58, n. 4; cf. Kroll 1993: 8). How far into the late-fourth or early-third century the *pi*-style coins were produced is not yet known, nor is it known if production was heavier in some decades compared to others.<sup>10</sup> Because no scholar has yet undertaken a comprehensive (die) study of the series, the rough bookend dates for the absolute chronology of c. 350–290 BCE cannot be refined, nor can we hint at a relative chronology. The fullest study of the series to date, that of Bingen (1973), remains useful as stylistic and typological analysis, but is perhaps misleading in its relative chronological implications (cf. Flament 2007: 128–130). A recently discovered hoard of *pi*-style owls in the excavations at the Athenian Agora may, when it is published, provide further insight into some of these dating problems (Camp 2005–06 and 2006–07; cf. Kroll 2006).

The *pi*-style flans are generally quite small relative to the surface area of the dies, thus large portions of the type are off-flan; the flans also exhibit different production techniques compared to earlier Athenian coinage. These included the striking of flans made by the flattening and folding over of other coins, presumably to speed up the over-striking process (cf. van Alfen 2002, pl. 10, no. 3). If one divides the flan-shapes into rough categories of “round” and “irregular,” the vast

10. The gold coins (e.g., ANS 1959.254.19) produced under the Athenian tyrant Lachares c. 294 BCE are *pi*-style suggesting that the silver *pi*-style coinage may have lasted into the third century; see Kroll 1993: 10.

majority of the *pi*-style flans are irregular.<sup>11</sup> When compared to fifth century owls this situation is inverted, the majority of the fifth century owl flans are round, emphasizing what would appear to be either less care taken in later fourth century coin production or the manifestation of different production methods, in contrast to the seeming greater care taken in the previous century. Despite changes in the production of their flans, the Athenians maintained consistency in their die orientation. The *pi*-style tetradrachms of the ANS hoard have die axes predominantly at 7:00–8:00; only 20% of the *pi*-style owls have an axis of 9:00, while 40% are oriented at 8:00 and 33% are oriented at 7:00. This is in line with the general 7:00–9:00 orientation observed for tetradrachm dies from the later fifth and fourth centuries (de Callatay 1996: 59–60). Although the size of the *pi*-style series makes die links difficult to find, we have, nevertheless, observed a handful of die links among the owls in this hoard and between these owls and owls from another hoard.<sup>12</sup> As noted in our general conclusions (below), the die links within the hoard could have implications for how the coins entered circulation.

## II. Cuts, Countermarks, and Graffiti

Most of the coins from the hoard (348, 73% of 475) have some type of post-production surface marking, whether cuts, countermarks/punches and/or graffiti.<sup>13</sup> The marks are remnants of the different modes of currency control that were commonly used in the Near East, but less so in the Aegean, where coins tended not to be heavily marked (cf. van Alfen 2004/5a: 17–19). Most of the marks were meant to convey precise information—to those equipped to decipher it—about the quality of the coin, its ownership, or its ability to circulate legally within a circumscribed area. Presently, we can only guess at the public or private nature and function

11. Here “irregular” comprises multiple categories: coins that are a variety of shapes but none of which could be considered reasonably round when struck, all generally with sections of the type off flan; those that were possibly round when struck but are currently misshapen; and those that are generally elliptical, ranging from egg-shaped to lozenge-shaped. “Round” includes those coins that are completely or almost completely round with only very minor irregularities.

12. Nos. 298 and 299 share the same obverse die; no. 298 appears to have been struck when the die was more worn. Nos. 326 and 336 share the same reverse die. No. 250 was struck from the same obverse die as no. 7 from the 1989 Syria hoard (van Alfen 2002a: pl. 1, no. 7).

13. “Cuts” are linear marks made with a knife or chisel that penetrate well below the surface of the coin. “Punches” are those marks made with a punch-like object whose head formed recognizable shapes like squares, circles, etc. “Countermarks” were also left by punch-like objects, but with more elaborately engraved designs. “Graffiti” are shallow scratches made with an awl or similar object.

of the institution(s) involved in the process of marking the coins since the only evidence we have for these institutions are the marks themselves (cf. Elayi and Lemaire 1998: ch. VI).

With one exception, no. 28, a double shekel of Sidon, all of the graffiti appears on owl-type coinage, predominantly *pi*-style owls. The most common graffiti is “X”, either a Greek *chi* or Aramaic *tau*, but perhaps simply the most basic mark known even to illiterates; this mark appears on coins nos. 67, 154, 162, 169, 213, 261, 462. Semitic *shin* is the next most common graffiti appearing on coins nos. 60, 76, 343, 399. *Gimel* appears on no. 208 and possibly in triplicate on no. 28, while *zayin* is found on no. 212. The lengthiest graffiti, the one on no. 28 excepted, is *shin waw*, appearing on no. 57, a Buttrey-type owl.

Letter form countermarks are found in abundance if we accept the “o”-like punch as a Phoenician *ayin* (nos. 72, 74, 88, 101, 156, 204, 221, 229, 308, 384; cf. Elayi and Lemaire 1998, figure 14); the “c”- and “<”-like punches as Aramaic *ayin* (nos. 50, 68, 72, 79, 110, 111, 248, 250, 262, 324; cf. Elayi and Lemaire 1998, figure 13); and the “x”-like punches as Aramaic *tau* (nos. 88, 124, 155, 219, 252). The semiotic value of these punches might have been enhanced by their placement on the coin: only four out of the 25 coins listed here have these marks on the reverse. The *ayin* and *tau* generally appears on the obverse on Athena’s cheek. Other possible letter form countermarks include *aleph* (no. 97), *gimel* (no. 86), *ayin* (no. 324), *ayin lamed* (no. 68?), *lamed* (or *waw*?)(nos. 86, 110), and *shin* (no. 178). Countermarks that have received attention elsewhere include one thought to be a South Arabian *kaph* that appears on four owls (nos. 55, 57, 90, and 168?), and which may be related to Persian bureaucratic practice (Elayi and Lemaire 1998: 201–02), and a *quatrefoil* countermark that van Alfen (2002b: 67–69) argued was used in some capacity by the Persian bureaucracy in Egypt.<sup>14</sup>

While the semiotic value of the graffiti and countermarks is not questioned, the nature of the message conveyed by the cuts is less than clear. That the cuts were often intended to expose the core metal as a test for counterfeits is generally accepted, and this may well have been the motivation for most of the cuts observed in this hoard. But observations of patterning in the placement of the cuts, particularly on owl-type coinage, opens the door to the idea that the cuts were not always for tests, but may have, at times, represented a (crude) marking system in and of themselves (van Alfen 2002a: 6–7; cf. 2004/5: 17–19). The theory finds support in the presence of indisputable designs formed by multiple cuts on several of the

14. The *quatrefoil* appears on fifth century type owls: nos. 93, 95, 103; early fourth century type owls: 108, 112; *pi*-style owls: 119, 122, 178, 241, 290, 374; unmarked imitative owl: 54; and an Artaxerxes type imitation: 44.

coins from this hoard. On three coins, two Buttrey-type owls (nos. 57, 65) and a Cilician stater (no. 20), three cuts form an arrow-like symbol; the same cut arrow symbol has been observed on owls from other hoards as well (Buxton and van Alfen forthcoming). Also appearing to be deliberately patterned are three cuts, one between the owl's eyes, one across the neck, and a third up the body, that form a cross on three other owls from this hoard, something that has also been observed elsewhere (nos. 81, 93, 228; cf. Buxton and van Alfen, forthcoming). Whatever it was that the symbols created by the three cuts signified, those who produced them did so using the simplest, and most readily available tools, a knife or chisel, rather than specialized tools like punches or countermarks. Presumably the intention of making the three cuts was not to test for subaerate cores, but rather to create a lisible sign. If so, then it remains possible that other cuts were meant to be lisible signs and not necessarily test cuts, particularly when they appear in what must have been carefully preselected areas on the coin, e.g., between the eyes of the owl.<sup>15</sup>

We can see in Table 2 that there is a marked preference for the placement of cuts on the *pi*-style owls from this hoard, primarily single cuts between the owl's eyes or across its neck or both together, which parallels the observations made on the cuts on owls from other hoards (van Alfen 2002: 67–69; Buxton and van Alfen, forthcoming). This lack of complete randomness could well have had semiotic significance.<sup>16</sup>

Tables 1 and 2 present the overall tally of all types of marks on the fifth century-type (37 coins; nos. 67–103) and *pi*-style owls (360 coins; nos. 116–469, R1–R6) from the hoard.<sup>17</sup> As can be seen, the proportions of marks and types of marks found on these two groups of owls differ little from comparable fifth and fourth century owls found in other (near-) contemporary hoards.<sup>18</sup> Looking only at the owls from the ANS Near East hoard, we note that there is not a considerable difference between the inclusive and exclusive proportions for the *pi*-style owls, whereas this is not the case for the fifth century type owls. This is to be expected, however, since the fifth century owls had been in circulation for much longer and thus could be expected to have accumulated more marks over time. This observation only re-

15. It is also possible that some cuts may have served double duty, both as tests cuts, but also, because of where they are placed, as signs that the cut was made by a particular institution or entity.

16. Buxton and van Alfen (forthcoming) discuss these problems at greater length and with a much larger data set.

17. In Tables 1 and 2, "Exclusive" means that the tally of whatever type of individual mark (e.g., countermark, graffito, etc.) appearing on a coin is exclusive of other marks; "inclusive," on the other hand, means it is counted with other marks of different types on the same surface.

18. Compare the 1973 Iraq hoard (van Alfen 2000, Table 2), the 1989 Syria hoard (van Alfen 2002a, Table 1), and the 2004 owl and bullion hoard (van Alfen 2004/5b: Table 1).

Table 1. Marks on fifth century type owls in the ANS Near East Hoard

<b>Proportion of total marked:</b>	97%
<b>Proportion of total with ctmk/punches only:</b>	3% (exclusive); 75% (inclusive)
<b>On obverse only:</b>	3% (exclusive); 40% (inclusive)
<b>On reverse only:</b>	0% (exclusive); 35% (inclusive)
<b>Proportion of total with single cut only:</b>	11% (exclusive); 54% (inclusive)
<b>On obverse only:</b>	0% (exclusive); 30% (inclusive)
<b>On reverse only:</b>	11% (exclusive); 24% (inclusive)
<b>Proportion of total with multiple cuts</b>	
<b>On one side only:</b>	16% (exclusive); 27% (inclusive)
<b>On obverse only:</b>	0% (exclusive); 0% (inclusive)
<b>On reverse only:</b>	16% (exclusive); 27% (inclusive)
<b>Proportion of total with single cut on obv. and rev. :</b>	5% (exclusive); 16% (inclusive)
<b>Proportion of total with multiple on obv. and rev. :</b>	5% (exclusive); 24% (inclusive)
<b>Proportion of total with more than two markings:</b>	54%

Table 2. Marks on fourth century type owls in the ANS Near East Hoard

<b>Proportion of total marked:</b>	69% (inclusive of all marks)
<b>Proportion of total with ctmk/punches only:</b>	8% (exclusive); 14% (inclusive)
<b>On obverse only:</b>	3% (exclusive); 8% (inclusive)
<b>On reverse only:</b>	3% (exclusive); 6% (inclusive)
<b>Proportion of total with single cut only:</b>	34% (exclusive); 48% (inclusive)
<b>On obverse only:</b>	2% (exclusive); 6% (inclusive)
<b>On reverse only:</b>	32% (exclusive); 42% (inclusive)
<b>Proportion with cut in eye only:</b>	28% (49% of rev cuts)
<b>Proportion with cut across neck:</b>	11% (20% of rev cuts)
<b>Proportion with eye and neck:</b>	6% (10% of rev cuts)
<b>Proportion of total with multiple cuts</b>	
<b>on one side only:</b>	12% (exclusive); 16% (inclusive)
<b>On obverse only:</b>	0% (exclusive); 1% (inclusive)
<b>On reverse only:</b>	12% (exclusive); 15% (inclusive)
<b>Proportion of total with single cut on obv. and rev. :</b>	5% (exclusive)
<b>Proportion of total with multiple on obv. and rev. :</b>	3% (exclusive)
<b>Proportion of total with more than two markings:</b>	9% (one or both sides)
<b>Proportion of total with graffiti:</b>	3% (inclusive)

affirms the fact that the semiotic value of most any individual mark was exclusive of any other mark on the coin and that the individual marks had a temporal and geographically limited value (cf. van Alfen 2002b: 67–69).

### III. Weights of *Pi*-Style Athenian coins

Among the 360 *pi*-style tetradrachms in the ANS hoard, the lowest weight is 14.73 g (followed by 15.12 g and 15.23 g), the highest weight is 17.45 g (which occurs twice, followed by 17.42 g), the median weight is 16.87 g, and the average weight is 16.81 g (see Appendix 1). Of the owls 268 (74%) fall between 16.50 and 16.99 g, while only 62 (17%) are 17.00 g and higher. Because the Attic weight standard for the fourth century is thought to have been well above 17.00 g, the overall low weight of the owls from this hoard deserves further exploration.

In a recent paper, Elsen (2002) argues that the weight standard of the Athenian tetradrachm from the sixth through third centuries BCE was 17.28 g, based on a 432 g mina (and its corresponding 4.32 g drachm).<sup>19</sup> Drawing evidence from textual sources, extant owls and issues of Alexander, Elsen presents solid arguments for the continuity of this theoretical mark. Nevertheless, the status of the Attic standard in the later fourth century is worth revisiting, both because it has attracted a fair amount of attention because of Alexander's adoption of it (e.g., Mørholm 1982; Price 1991a: 41–44), and because there appear to be anomalies in the weights of the *pi*-style owls.

There is general agreement that the theoretical Attic standard for tetradrachms in the later fourth century lay between c. 17.20 and 17.30 g, while in reality the owls were not always struck at full weight. Mørholm (1982: 143) suggested that the weight standard in the Levant under Alexander was between 17.30–17.40 g until 317 BCE, when it was reduced to 17.00–17.09 g, the first of several such Hellenistic reductions. Price (1991a: 43), in turn, demonstrated that Mørholm's elevated standard was based on false methodology and a sample size that was too small, and instead posited that the standard under Alexander was likely between 17.25 and 17.30 g, with most coins he observed falling within 2% of that range. Naster's (1983: 83) focus on Athenian owls of the sixth through fourth centuries suggested a mark of 17.17 g.<sup>20</sup> However, it has also been noticed that the weights of owls circulating in the Near East are more often than not significantly below the theoretical Attic standard. Bivar (1985: 615) concluded that the standard employed in this case was not the Attic, but rather a Babylonian shekel (c. 8.40 g) that when

19. Elsen's standard of 17.28 g was independently confirmed by Kroll (2008: 45, n. 8) using different methods.

20. Naster's data set was 457 coins from Svoronos (1923), though not the same coins as those in the Svoronos group used here see below.

doubled would provide a near-tetradrachm weight of c. 16.80 g. This, rather than the Attic, was possibly the standard employed by those producing Athenian imitations in the Near East (cf. van Alfen 2000: 18–19), but it is highly doubtful that the Athenians would have at any time adopted the shekel standard for themselves.

The *pi*-style weights from the ANS hoard are no exception to the observed Near Eastern trend, which brings into focus the disparity between the theoretical standard and actual coin weights. Underweight coins are, of course, nothing new. Generally, this can be attributed to the desire not to surpass the theoretical weight mark in the production of coinage, careless minting practices, or planned fiduciarity (cf. Kagan 2006). In practice, as Elsen (2002) has demonstrated, the Athenians maintained their theoretical standard of 17.28 g for the tetradrachm but appear to have struck coins weighing on average c. 17.15 g; the c. 0.10 g difference (within c. 1% of the ideal weight) was undoubtedly an acceptable margin that erred on the side of caution to prevent the production of overweight coins, which would entail monetary loss for the state. Nevertheless, the average weight of owls found in the Near East is generally several tenths of a gram below even the work-a-day mark of c. 17.15 g, meaning that the discrepancy between the theoretical weight and actual average weight of these owls would appear to be closer to 3% off the mark rather than 1%. Our concern is whether this larger margin was, in fact, real, and if it was, what its significance might have been.

To explore these issues, we have compiled a statistically sound data set that is both larger and more inclusive than those used previously.

### DESCRIPTION OF THE DATA SETS

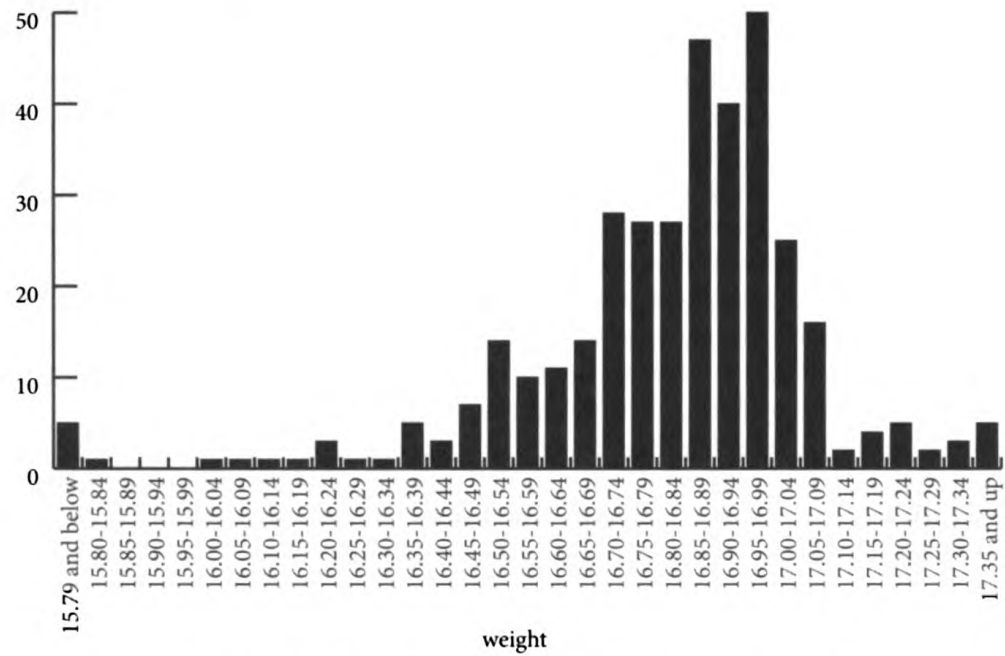
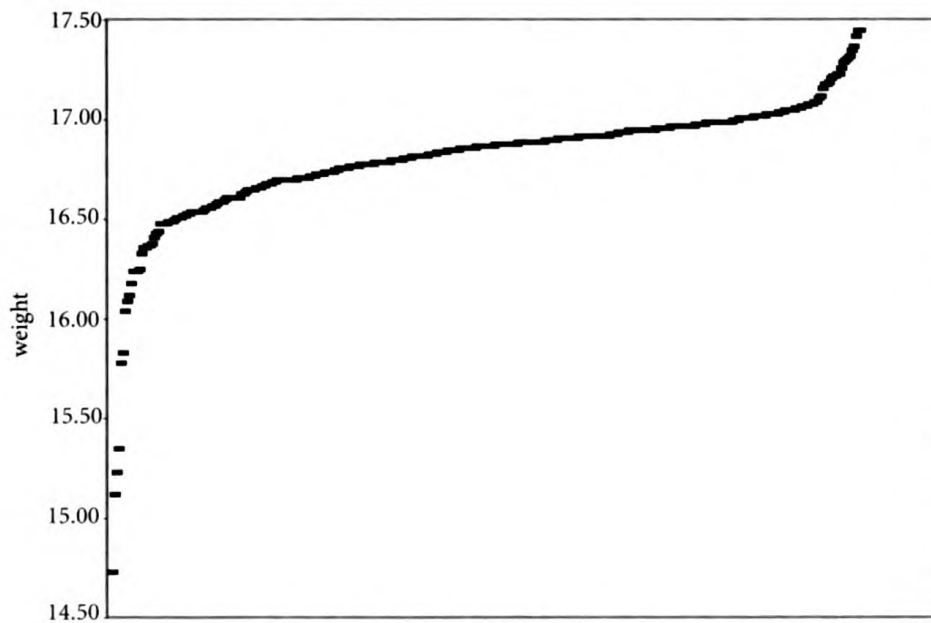
**ANS Near East hoard:** 360 *pi*-style tetradrachms (Figs. 1 and 2).<sup>21</sup> This does not include the unmarked imitations. A number of the higher weight (above 17.10 g) tetradrachms in this portion of the hoard appear to be heavily worn, yet are all coated in an unusual dark patina that may be contributing to their higher weights: nos. 370, 372, 373, 375–379, 407, 409, 413, 433, 447.

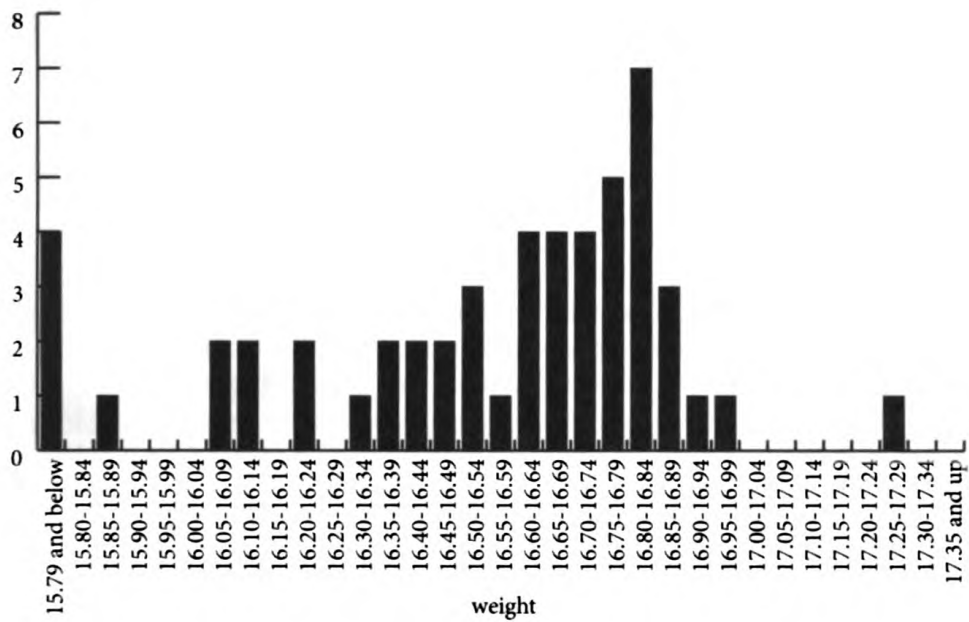
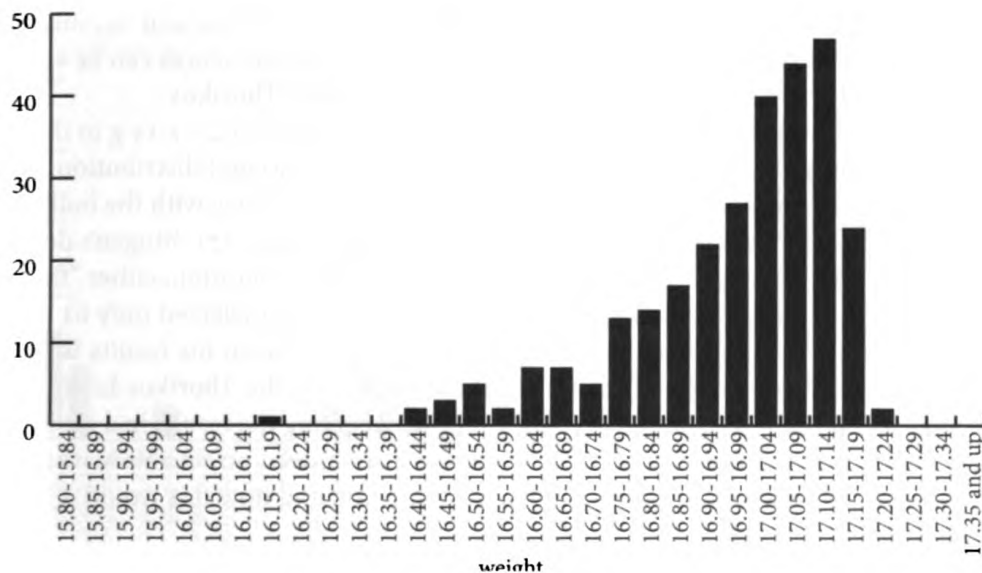
**1973 Iraq hoard** (van Alfen 2000): 52 *pi*-style tetradrachms (Fig. 3). This does not include the tetradrachms classified by van Alfen as imitations.

**Thorikos 1969 hoard** (Bingen 1973): 282 *pi*-style tetradrachms (Fig. 4). An important characteristic of this group is that the coins fall within a much shorter range than the other groups, with only two above 17.20 g and only one below 16.40 g, which, in comparison to the other groups, is unusual given the sample

21. Fig. 2 shows the trend of the weights of the 360 tetradrachms as a continuous series. Gaps in the line are weights that do not appear in the group, and the longer unbroken segments show where multiple coins have the same weight.



Figure 1. Weights of *Pi*-style Tetrachrms in ANS Near EastFigure 2. *Pi*-style Tetrachrms in ANS Near East in Weight Order

Figure 3. Weights of *Pi*-style Tetradrachms in 1973 IraqFigure 4. Weights of *Pi*-style Tetradrachms in Thorikos 1969

size. These coins, in what Bingen calls a circulation or emergency hoard instead of a savings or bank hoard (1973: 8), circulated closer to their mint of issue, which could explain both their higher average weights and tighter range.

**Svoronos:** 292 *pi*-style tetradrachms illustrated by Svoronos (1923) on plates 20, 26–32 (Fig. 5). These coins come from hoards found in various parts of Greece, though some were also found in Egypt. This group has an unusually high number of low weight coins—23 are below 15.79 g.

**ANS ‘Egyptian’ Owls** (van Alfen 2002b and 2004–5b): 77 *pi*-style tetradrachms, all presumably *bona fide* owls found in Near Eastern contexts, particularly Egypt (Fig. 6). Specifically, there are 15 tetradrachms from Endicott’s Hoard (2002b), 20 from “Miscellaneous Owls” (2002b)<sup>22</sup> and 42 from “A New Athenian ‘Owl’ Hoard” (2004–5b). This group has an unusually high number of tetradrachms over 17.10 g (28 out of 77 or 36%), compared to 26% for Thorikos and 6% for ANS Near East.

**All *Pi*-Style** (All categories combined): 1063 tetradrachms (Fig. 7).

For the histograms we have adopted intervals of 0.05 g in preference to the 0.10 g used by Elsen (2002) and Mørkholm (1982: 141) in order to facilitate a more precise determination of where it is the weights begin to rise. Comparisons among the different data sets have been made based on percentages, rather than comparing the counts for each interval, in order to see the relative variations among the groups of different sizes. Despite Mørkholm’s theories for doing so (1982: 141; but see Price 1991a: 43), we have not adjusted for factors of wear since there is no accepted methodology for determining ancient coin wear over time and because it does not appear to be an important variable in the *pi*-style data sets as can be seen in Bingen’s (1973) analysis of the 282 *pi*-style owls found at Thorikos.

Bingen’s histograms confirm Elsen’s work-a-day standard of c. 17.15 g in their comparatively high (*vis-à-vis* owls found in the Near East) weight distribution: an average of 17.137 g, a mode of 17.143 g and a median of 17.139 g, with the bulk of the coins falling in a range from 17.10–17.20 g (Bingen 1973: 57). Bingen’s decision to use only those coins he considered to be in the best condition, either “fleur de coin” or “traces de circulation perceptibles” meant that he selected only 61 out of the 282 coins in the hoard to achieve his results. The bias in his results is not perceptibly changed by the inclusion of all the owls from the Thorikos hoard as can be seen in Fig. 4. Thus his concerns about wear affecting the results in a significant manner were unwarranted. Also, while there are indeed no reliable statistics for how quickly ancient coins wore down in circulation and how this would affect

22. This total omits five tetradrachms that were either imitations or fifth century style, as well as one fused coin that is included in the published group.

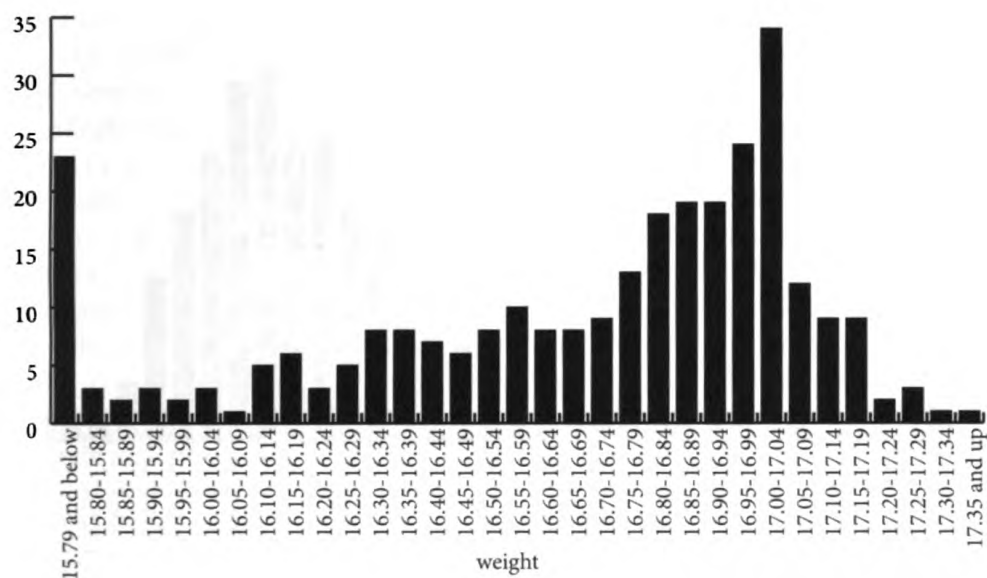


Figure 5. Weights of Pi-style Tetrachms in Svoronos Group (n= 292)

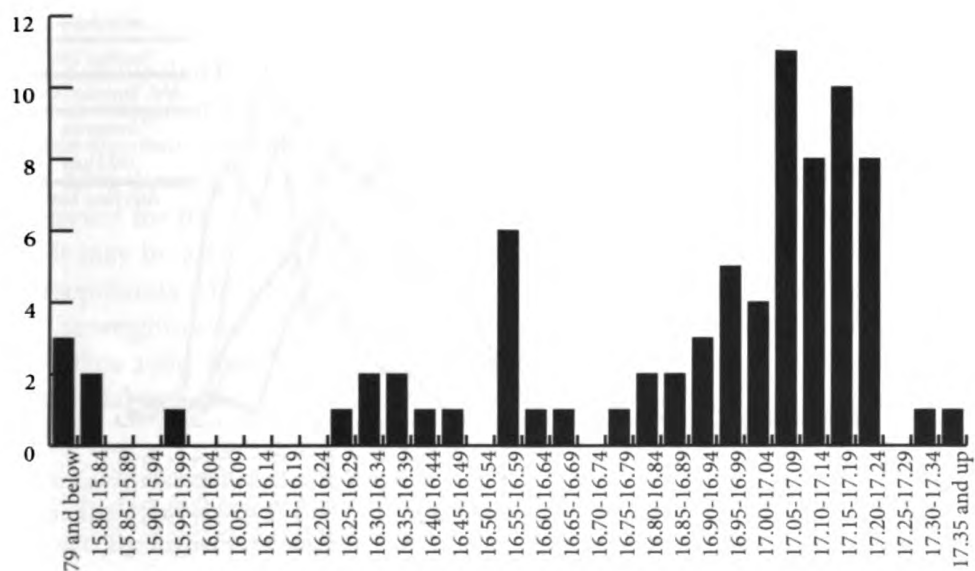
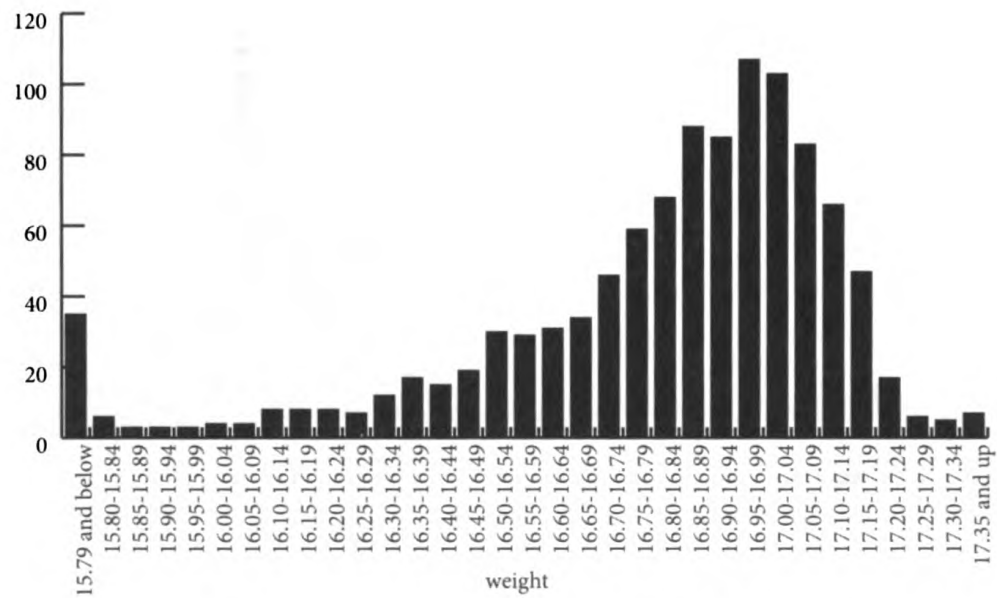
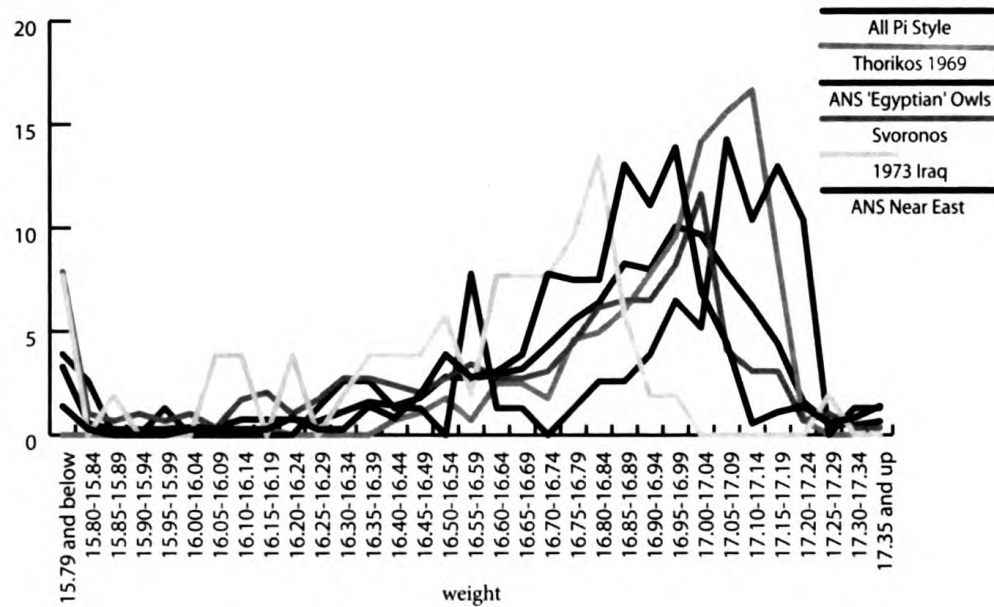


Figure 6. Pi-style Tetrachms in ANS 'Egyptian' Owls Group (n= 77)

Figure 7. Weights of *Pi*-style Tetradrachms in All *Pi*-style Groups (n= 1063)Figure 8. Comparison of *Pi*-style Groups by Percentage of Group Totals

their weights, we may be able to use the fifth century owls from the ANS Near East hoard as a rough measuring stick.

All 37 fifth century owls from the hoard show considerable wear since most had been in circulation for nearly a century by the time the hoard was buried. The highest weight in this group of owls is 17.12 g, the lowest 15.16 g; the median is 16.14 g, the average weight 16.49 g. If we assume that the coins when fresh weighed c. 17.15 g, on average each coin within the group lost a cumulative total of c. 0.65 g, or roughly 4% of its weight, over the course of nearly 100 years. We cannot say if the amount of wear that took place in the first decade of circulation was greater than subsequent decades, but it would appear that on average a single decade of circulation would make little discernible difference in the weight of the owls. For our purposes, this is a useful observation since the *pi*-style owls under consideration here, both those from the ANS Near East and other hoards, had presumably only been in circulation for a decade or two before they were concealed. Again, wear would seem not to be an important variable in our analysis.

Here is a rundown of the possible actual (versus theoretical) weight standards for each group suggested by the histograms in Figs. 1–6:

ANS Near East	17.05–17.09 g
1973 Iraq	16.85–16.89 g
Thorikos 1969	17.15–17.19 g
Svoronos	17.15–17.19 g (or possibly lower, 17.10–17.14 g) <sup>23</sup>
ANS 'Egyptian' Owls	17.20–17.24 g
All Pi-Style	17.15–17.19 g (or possibly higher, 17.20–17.24 g) <sup>24</sup>

It is notable that the Svoronos group and Thorikos 1969 may have the same initial rise in weight at 17.15 g, although differing in their overall weight distributions, while the two main Near Eastern hoards are at least 0.10 g lower compared to the ANS 'Egyptian' Owls group, which is the highest. The extremely low weights observed for the 1973 Iraq hoard may be unreliable due to its small sample size or it may be a true reflection of the common *pi*-style weights in the region of Mesopotamia when it was concealed c. 323/2 BCE. The peaks at the upper end of the weight range of the combined group are entirely due to the high weights of Thorikos 1969, Svoronos and the ANS 'Egyptian' Owls group and do not reflect the initial rise detected in the ANS Near East and 1973 Iraq hoards. Comparison

23. Each interval has nine examples.

24. The 17.15–17.19 g interval has 47 examples; the 17.20–17.24 g interval has 17 examples. The higher total sample number again affects the determination of the first significant rise in the graph. The heavier interval is clearly an important group, but it is uncertain whether it should be counted as the most important rise and therefore indicative of the weight standard.

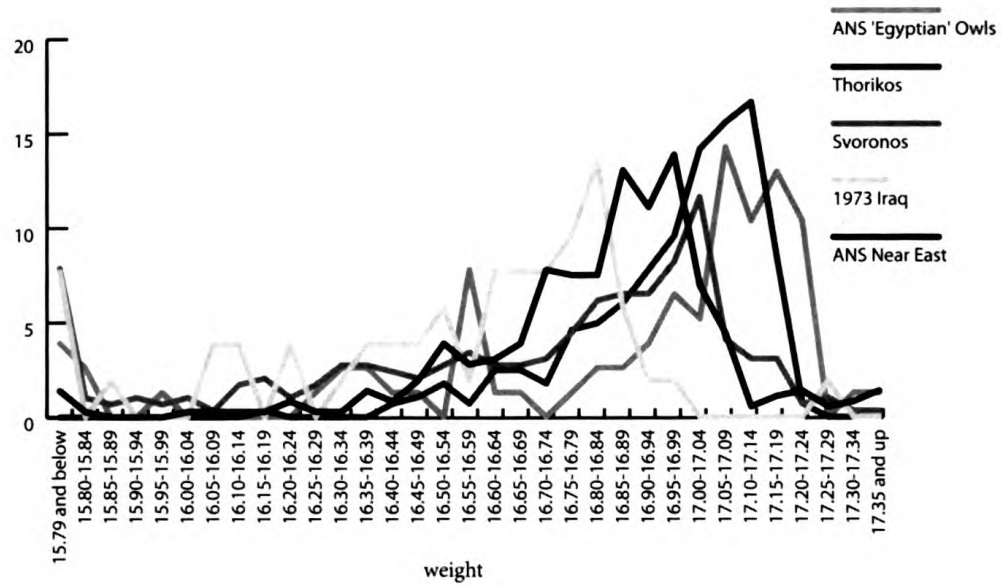
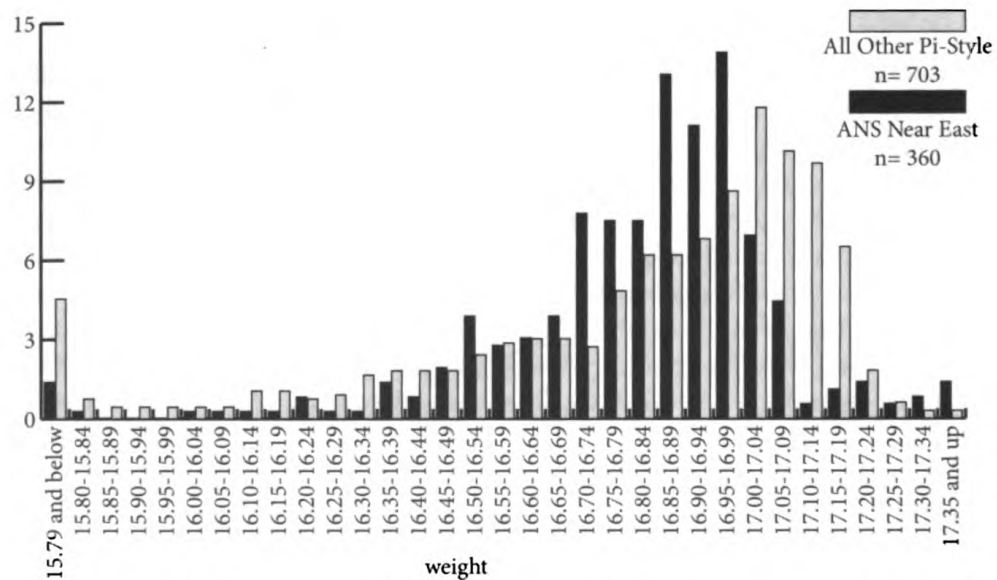


Figure 9. Detail, Comparison of Groups

Figure 10. Comparison of ANS Near East with All Other *Pi*-style Owls

of relative numbers among the groups shows interesting patterns (Figs. 8 and 9). The weights for Thorikos 1969 are much higher than the other hoards and have already begun to slope downward when ANS Near East reaches its highest numbers, with the Thorikos hoard most strikingly skewed toward the heavier end of the scale when compared to 1973 Iraq. When compared with the tetradrachms from the Svoronos group, Thorikos 1969 has a much higher percentage of higher weight coins, despite the fact that the two groups seem to have the same standard. The weights of ANS Near East when set next to the combined relative distributions of the other groups show again how underweight the 360 *pi*-style owls of the ANS Near East group are compared to all 703 of the tetradrachms used in the other groups (Fig. 10).

For the hoards used here, there is a slight, but clear difference in the weight distributions of the coins circulating in Greece and Egypt on the one hand versus the coins circulating in the Levant and Near East on the other. Whether this is due to conditions present when the coins entered the archaeological record or is due to their manner of retrieval is unknown.<sup>25</sup> We may, for example, be observing signs that underweight Athenian coins were deliberately selected (at Athens? in Phoenicia?) for transport (cf. Xen. *Oec.* 3.2) to areas in the Levant where any additional weight over c. 16.80 g could complicate rather than facilitate transactions based on shekels because it would require weighing individual coins instead of counting them. In other extra-Aegean areas, like Egypt, as the ANS 'Egyptian' group might demonstrate, full-weight owls may have been readily welcomed as a unit of value in and of themselves (cf. van Alfen 2004/5a: 24, n. 35).

On the other hand, it is possible that post-depositional factors are contributing to these observations. If, for example, the coins from the ANS Near East hoard were cleaned by being dipped in acid, this could potentially have uniformly reduced their weights. Groups of coins cleaned in this manner or simply over-cleaned—as possible, for instance, with other Near Eastern hoards found outside of excavation contexts—may no longer accurately represent their weights in antiquity, but we cannot speculate about the degree to which they might be changed. Under the circumstances, it is impossible to know whether the differences noticed between Thorikos 1969 on the one hand and the ANS Near East and 1973 Iraq hoards on the other are due to the fact that the first was properly excavated and cleaned or due to the fact that the coins in that hoard circulated in Attica, where

25. It is here appropriate to lament the fact that the weights of the owls from the 1989 Syria hoard (van Alfen 2002a) could not be included in these calculations to give a more balanced idea of the weights of coins known to have circulated in the Near East. The loss of the complete record of that hoard's weights (among other things), resulting from its illicit excavation and almost immediate dispersal on the market, leaves a considerable gap in our analysis.



owls closest to full weight would naturally be in demand.

Overall, our analysis confirms Elsen's theoretical standard for the Athenian tetradrachm of 17.28 g, which in practice resulted in coins weighing closer c. 17.15 g, but it also suggests that there is further work to be done on the weight differentiation and circulation patterns of Athenian tetradrachms in the eastern Mediterranean and farther east.

#### IV. OVERALL DATING AND COMPOSITION

The bulk of the coinage—the *pi*-style owls—indicate that the hoard was deposited sometime after the 350s BCE, a claim that is supported by the non-Athenian types, which bring the date in closer to around the third quarter of the fourth century. While the Sinopean issues of Ariarathes (nos. 2–3) and the Aspendian staters (nos. 11–12) are from series that have been dated down to the mid-320s, these dates are not firm, nor can we be certain that the coins in our hoard are among the latest produced in those series. The dated Phoenician issues, a Tyrian shekel (no. 36) from 334 BCE, and a Sidonian double shekel (no. 28) also dated 334 BCE, provide a more rigid *terminus post quem*; we suggest a burial date between 334 and 330.<sup>26</sup> The fact that, at least in what we have of the hoard, there are no issues of Alexander III supports a date before 330, assuming that Alexander's issues had not yet reached wide circulation in the Near East by that time.

Comparisons with the 1989 Syria hoard (CH 8. 158; van Alfen 2002a) are unavoidable: the two hoards are, for all intents and purposes, exactly coeval and both were reportedly found in the same general region. More importantly the composition of both hoards is strikingly similar with Sinopean, "Royal Achaemenid," Tarsian, Issian, and Phoenician issues found in both, in addition to an abundance of owls including Artaxerxes-type imitations from Egypt.<sup>27</sup> The possibility that these may be two parts of the same hoard cannot be discounted, yet it is perhaps just as likely that they were both formed from a similar pool of circulating currency that included, in the rough proportions of issues found in both hoards, coins from Athens and various parts of the Aegean, Asia Minor, Egypt, and the Levant. The geographical distribution of the minting locations of these coins follows more or

26. No. 28 is especially crisp, but no. 36, on the other hand, is not, nor is it even the crispest amongst the Tyrian coins (nos. 32 and 34 show less wear and are supposed to be c. 20 and 12 years older than no. 36).

27. Price (1993) suggested a date of c. 330 BCE for the 1989 hoard, which was said to have been found 100 km east of Aleppo. Of the 164 coins that Price recorded, 142 were Athenian owl types; the remaining 22 coins (see the catalogue, Price, 1993: 33–34) were from Sinope (4), Cyzicus (1), Ephesus (1), Tarsus (7), Hierapolis-Bambyce (5), and Tyre (4). For the owl-type component of the hoard, see van Alfen (2002a).

less along the route the Macedonians took into the east. Die-linking among the Egyptian Artaxerxes issues (nos. 42 and 43) suggests that these coins left a satrapal treasury together, perhaps as a payment, and stayed together over the long trek from Egypt to Syria, which may also suggest a link to Alexander's campaigns.<sup>28</sup> However, there is not sufficient evidence to associate this hoard directly with Alexander's campaigns; at most we might argue for a tangential link. Within the political and economic turmoil of the late 330s, it is possible that stocks of coins that normally would not have circulated far from home (e.g., the Egyptian Artaxerxes issues) might have been broken out of their more restricted circulation areas, as it were, and been swept up in the vortices of armies, baggage trains, and merchants that were criss-crossing the eastern Mediterranean. For this reason we do not know if the ANS Near East and 1989 Syria hoards are representative of "normal" circulation patterns for the Persian Fifth Satrapy in the period immediately predating Alexander's onslaught. Only a more detailed study of the hoard evidence, one that traces trends for a number of decades before and after c. 330 BCE, and that encompasses a sufficient geographical range, might answer that question.

28. Commenting on die-links found among the Artaxerxes and Sabakes type Egyptian imitations in the 1989 Syria hoard, van Alfen (2002a: 50) notes that "[t]he coincidence of three sets of coins in two series found in one hoard over a thousand miles from their mutual place of origin requires explanation; the most logical of which would be that these six coins are the remnants of a payout by the Egyptian satrapal treasury, wherein one would expect to find large numbers of linked issues resting in the coffers together. To these six coins we should add the remaining twelve Artaxerxes and Sabakes types of the hoard; the evidence of the circulation of these types outside of Egypt is virtually limited to the 1989 hoard, so it would not be stretching the case much to assume that the eighteen coins left Egypt together as one lot. We cannot guess at the circumstances of the payment, or if the coins were turned over to the payee within Egypt or outside." See also n. 12 above for die linking among the *pi*-style owls. To date no die links have been observed among *pi*-style owls recovered from the same Near Eastern hoard, with the exception of ANS Near East, which could mean that these coins too had traveled in batches from Athens and subsequent treasuries.

## REFERENCES

- Betlyon, J. W. 1982. *The coinage and mints of Phoenicia: the pre-Alexandrine period*. Harvard Semitic Monographs 26. Chicago.
- Bingen, J. 1973. Le trésor monétaire Thorikos 1969. *Thorikos* 6: 7–59.
- Bivar, A. D. H. 1985. Achaemenid coins, weights and measures. In *The Cambridge ancient history of Iran, vol. 2: the Median and Achaemenid periods*, I. Gershevitch, ed., pp. 610–639. Cambridge: Cambridge University Press.
- Buttrey, T. V. 1982. Pharaonic imitations of Athenian tetradrachms. In *Proceedings of the 9th International Congress of Numismatics, Berne, September 1979*, vol I, T. Hackens and R. Weiller, eds., pp. 137–140. Louvain-la-Neuve and Luxembourg: Association Internationale des Numismates Professionnels.
- . 1984. Seldom what they seem: the case of the Athenian tetradrachm. In *Ancient coins of the Graeco-Roman world: the Nickle numismatics papers*, W. Heckel and R. Sullivan, eds., pp. 292–294. Waterloo, Ont.: Wilfrid Laurier University Press for the Calgary Institute of for the Humanities.
- Buxton, R. F. and P. G. van Alfen (forthcoming). A massive hoard of Athenian owls from the Near East: behavioral aspects.
- Camp, J. 2005–06. Anc. Agora. *Archaeological Reports* 52: 5–8.
- . 2006–07. Anc. Agora. *Archaeological Reports* 53: 3–7.
- Casabonne, O. 2004. *La Cilicie à l'époque achéménide*. Paris: De Boccard.
- De Callataj, F. 1996. *Les monnaies grecques et l'orientation des axes*. Glaux 12. Milan: Edizioni Ennerre.
- Elayi, J. and A. G. Elayi. 2004a. *Le monnayage de la cité phénicienne de Sidon à l'époque Perse (Ve–Ive s. av. J. -C)*. Paris: Supplément no. 11 à Transeuphratène, Gabalda.
- . 2004b. Le monnayage sidonien de Mazday. *Transeuphratène* 27: 155–162.
- Elayi, J. and A. Lemaire. 1998. *Graffiti et contremarques ouest-sémitiques sur les monnaies grecques et proche-orientales*. Glaux 13. Milan: Edizioni Ennerre.
- Elsen, J. 2002. La stabilité du système pondéral et monétaire attique (VIe–IIe s. avant notre ère). *Revue belge de numismatique et de sigillographie* 148: 1–32.
- Flament, C. 2001. À propos des styles d'imitations athéniennes définis par T. V. Buttrey. *Revue belge de numismatique et de sigillographie* 147: 39–50.
- . 2003. Imitations athéniennes ou monnaies authentiques? Nouvelles considérations sur quelques chouettes athéniennes habituellement identifiées comme imitations. *Revue belge de numismatique et de sigillographie* 149: 1–10.
- . 2005. Un trésor de tétradrachmes athéniens dispersés suivi de considérations relatives au classement, à la frappe et à l'attribution des chouettes à des ateliers étrangers. *Revue belge de numismatique et de sigillographie* 151: 29–38.
- . 2007. *Le monnayage en argent d'Athènes: de l'époque archaïque à l'époque hellénistique (c. 550–c. 40 av. J. -C. )*. Louvain-la-Neuve.

- Gitler, H. and O. Tal. 2006. *The coinage of Philistia of the fifth and fourth centuries BC: a study of the earliest coins of Palestine*. Milan/New York: Edizioni Ennere/Amphora.
- Harrison, C. M. 1982a. *Coins of the Persian satraps*, Ph. D. diss., University of Pennsylvania.
- . 1982b. Persian names on coins of northern Anatolia. *Journal of Near Eastern Studies* 41: 181–194.
- IGCH = Thompson, M., O. Mørkholm, and C. M. Kraay, eds. 1973. *An inventory of Greek coin hoards*, New York: American Numismatic Society.
- Kroll, J. H. 1993. *The Athenian Agora vol. XXVI: the Greek coins*. Princeton: The American School of Classical Studies at Athens.
- . 2006. Athenian tetradrachms recently discovered in the Athenian Agora. *Revue Numismatique* 162: 57–64.
- . 2008. Early Iron Age balance weights at Lefkandi, Euboea. *Oxford Journal of Archaeology* 27. 1: 37–48.
- Meadows, A. 2002. Royal Achaemenid issues (?). In *The Pixodarus hoard (CH 9. 421)*. *Coin Hoards IX*, R. H. J. Ashton, N. Hardwick, P. Kinns, K. Konuk, and A. R. Meadows, eds., pp. 210–212. London: Royal Numismatic Society.
- Mørkholm, O. 1982. The Attic coin standard in the Levant during the Hellenistic period. In *Studia Paulo Naster oblata. I Numismatica antiqua*, S. Scheers, ed., pp. 139–149. Louvain: Department Orientalistiek.
- Naster, P. 1983. *Scripta nummaria: contributions à la méthodologie numismatique*, Société Royale de Numismatique Marcel Hoc.
- Newell, E. T. 1931. *The Küchük Köhne hoard*. Numismatic Notes and Monographs 46. New York: American Numismatic Society.
- Nicolet-Pierre, H. 2001 (2004). Retour sur le trésor de Tel el-Athrib 1903 (IGCH 1663) conservé à Athènes. *Arkhaiologike ephemeris* 139: 173–187.
- , and C. Arnold-Biucchi. 2000. Le trésor de Lentini (Sicile) 1957 (IGCH 2117). In *Pour Denyse: Divertissements Numismatiques*, S. Hurter and C. Arnold-Biucchi, eds., pp. 165–171.
- Oeconomides, M. 2006. Contribution à l'étude du monnayage athénien à l'époque classique (suite): le trésor trouvé à Ano Voula en 1979. *Revue Numismatique* 152: 73–76.
- Price, M. J. 1991a. *The coinage in the name of Alexander the Great and Philip Arrhidaeus*. Zurich/London: Swiss Numismatic Society and British Museum Press.
- . 1991b. Circulation at Babylon in 323 B. C. In *Mnemata: Papers in Memory of Nancy M. Waggoner*, W. E. Metcalf, ed., pp. 63–72. New York: The American Numismatic Society.
- . 1993. More from Memphis and the Syria 1989 hoard. In *Essays in honor of Robert Carson and Kenneth Jenkins*, M. Price, A. Burnett and R. Bland, eds., pp. 32–35. London: Spink and Sons.

- Svoronos, J. 1923 [1975]. *Corpus of the ancient coins of Athens*. Chicago: Ares.
- Tekin, O. 2000. Aspendian 'wrestlers': an iconographic approach. In *Mecanismes et Innovations Monétaires dans l'Anatolie Achéménide: Numismatique et Histoire. Actes de la Table Ronde Internationale d'Istanbul, 22-23 mai 1997*, O. Casabonne, ed., pp. 159-169. *Varia Anatolica* XII.
- Van Alfen, P. G. 2000. The "owls" from the 1973 Iraq hoard. *American Journal of Numismatics* 12: 9-58.
- . 2002a. The 'owls' from the 1989 Syria hoard with a review of pre-Macedonian coinage in Egypt. *American Journal of Numismatics* 14: 1-58.
- . 2002b. Two unpublished hoards and other "owls" from Egypt. *American Journal of Numismatics* 14: 59-71.
- . 2004/5a. Herodotus' "Aryandic" Silver and Bullion Use in Persian-Period Egypt. *American Journal of Numismatics* 16/17: 7-46.
- . 2004/5b. A new Athenian 'owl' and bullion hoard from the Near East. *American Journal of Numismatics* 16/17: 47-61.
- . 2005. Ancient imitative and counterfeit coinage in context. In *Making, moving, and managing: the new world of ancient economies, 323-31 BC*, Z. Archibald, J. Davies, and V. Gabrielsen, eds., pp. 322-354. London: Oxbow.
- . 2008. The later fourth century BCE coinage of Issos. *American Journal of Numismatics* 20: 199-208.
- Vleeming, S. P. 2001. *Some coins of Artaxerxes and other short texts in the Demotic script found on various objects and gathered from many publications*. *Studia Demotica* V. Leuven: Peeters.
- Wartenberg, U. 1998. Eastern imitation of Athenian tetradrachm. *Numismatic Chronicle* 158: 51.
- Weiser, W. 1989. Die Eulen von Kyros dem Jüngerem: zu den ersten Münzporträts lebender Menschen. *Zeitschrift für Papyrologie und Epigraphik* 76: 267-296.
- Wroth, W. 1889. *Catalogue of Greek Coins: Pontus, Paphlagonia, Bithynia, and the Kingdom of Bosphorus*. London: British Museum.

APPENDIX I. CATALOGUE OF *Pi*-STYLE OWLS

Cat. No.	Weight (g)	Axis	cut obv.	ctmk. obv.	cut rev.	ctmk. rev.	Notes	ANS No.
116	16.54	9	1? (eye)	0	2	0		2006. 12. 39
117	16.36	7	0	0	1	0		2006. 12. 43
118	17.03	7	0	0	3	0		2006. 12. 47
119	16.68	9	0	2?	2	1		2006. 12. 48
120	16.78	9	0	0	2	0		2006. 12. 51
121	16.74	8	0	0	1	0		2006. 12. 52
122	17.06	8	0	1	1	0		2006. 12. 53
123	16.99	7	0	1	0	0		2006. 12. 54
124	17.02	7	1	1	1	0		2006. 12. 55
125	16.70	7	1	0	1	0		2006. 12. 56
126	16.97	7	0	0	0	0		2006. 12. 57
127	17.03	7	1	0	1	0		2006. 12. 58
128	16.61	7	0	0	0	0		2006. 12. 59
129	16.78	7	0	0	0	0		2006. 12. 60
130	16.90	8	0	0	2	0		2006. 12. 61
131	16.92	8	1	0	2	0		2006. 12. 62
132	16.71	9	0	1	1	0	heavily marked	2006. 12. 63
133	16.92	7	0	0	0	0		2006. 12. 64
134	17.05	8	0	0	0	0		2006. 12. 65
135	16.83	9	0	0	1	0		2006. 12. 66
136	16.24	8	0	0	1	0		2006. 12. 67
137	15.78	9	1	0	1	0		2006. 12. 68
138	16.90	8	0	0	1	0		2006. 12. 69
139	16.70	9	0	0	1	0		2006. 12. 70
140	17.01	8	0	0	1	0		2006. 12. 71
141	16.41	8	1	0	1	0		2006. 12. 72
142	17.06	7	1	0	0	0		2006. 12. 73
143	16.82	7	0	0	2	0		2006. 12. 74
144	16.70	7	0	0	0	0		2006. 12. 75
145	16.67	8	0	0	1	0		2006. 12. 76
146	16.77	9	0	0	1	0		2006. 12. 77
147	16.93	8	3?	0	2?	0		2006. 12. 78
148	16.37	9	0	0	0	0		2006. 12. 79
149	16.92	8	0	0	1	0		2006. 12. 80
150	16.97	9	0	0	1	0		2006. 12. 81

Cat. No.	Weight (g)	Axis	cut	obv. count.	cut	rev. count.	Notes	ANS No.
				obv.		rev.		
151	16.71	7	0	0	1	0		2006. 12. 82
152	16.78	8	0	0	2	0		2006. 12. 83
153	17.18	6	0	0	1	0		2006. 12. 84
154	16.88	7	0	0	1	0		2006. 12. 85
155	16.87	7	0	1	0	0		2006. 12. 86
156	16.86	9	1	1	1	0		2006. 12. 87
157	16.87	8	0	0	1	1		2006. 12. 88
158	17.09	7	0	0	1	0		2006. 12. 89
159	16.91	7	0	0	0	0		2006. 12. 90
160	17.07	8	0	0	2	0		2006. 12. 91
161	15.35	9	1	1	1	0		2006. 12. 92
162	16.98	7	0	0	0	1		2006. 12. 93
163	16.81	9	1 small	0	0	2		2006. 12. 94
164	16.54	8	0	0	0	0		2006. 12. 95
165	17.01	7	0	0	2	0		2006. 12. 96
166	16.86	8	0	0	joined 0	0		2006. 12. 97
167	17.05	7	0	0	1	0		2006. 12. 98
168	16.99	6	0	2	0	0		2006. 12. 99
169	16.82	8	0	0	1	0		2006. 12. 100
170	16.48	6	0	1	0	3		2006. 12. 101
171	16.51	7	0	1	0	0		2006. 12. 102
172	16.44	8	0	0	2	0		2006. 12. 103
173	16.95	8	0	0	1	0		2006. 12. 104
174	15.83	9	0	0	0	0		2006. 12. 105
175	16.75	8	1	0	0	0		2006. 12. 106
176	16.75	7	0	0	2	0		2006. 12. 107
177	16.96	8	1	0	0	0		2006. 12. 108
178	16.92	7	0	5	0	2		2006. 12. 109
179	16.88	8	0	1	2	0		2006. 12. 110
180	17.04	9	0	0	2	1		2006. 12. 111
181	16.82	8	0	1	1	0		2006. 12. 112
182	16.80	8	0	0	1	0		2006. 12. 113
183	16.92	6	0	0	0	0		2006. 12. 114
184	16.94	7	0	0	1	0		2006. 12. 115
185	16.92	7	0	0	1	0		2006. 12. 116
186	16.99	8	0	0	0	0		2006. 12. 117
187	16.92	9	0	0	0	0		2006. 12. 118

Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
					obv.			rev.		
188	16.86	7	0	0	0	0	0	0		2006. 12. 119
189	16.82	8	0	0	0	0	0	0		2006. 12. 120
190	16.88	9	0	0	0	3	0	0		2006. 12. 121
191	17.08	7	0	0	0	1	0	0		2006. 12. 122
192	17.18	7	0	0	0	1	0	0		2006. 12. 123
193	17.37	7	0	0	0	1	0	0		2006. 12. 124
194	16.99	8	0	0	0	0	0	0		2006. 12. 125
195	16.80	7	0	0	0	3	0	0		2006. 12. 126
196	16.43	7	0	0	0	1	0	0		2006. 12. 127
197	16.85	8	0	0	0	0	0	0		2006. 12. 128
198	16.92	7	0	0	0	0	0	0		2006. 12. 129
199	16.48	7	0	0	0	0	0	0		2006. 12. 130
200	16.04	9	0	0	0	1	0	0		2006. 12. 131
201	17.03	8	0	0	0	0	0	0		2006. 12. 132
202	17.19	7	0	0	0	1	0	0		2006. 12. 133
203	16.89	8	0	0	0	2	0	0		2006. 12. 134
204	16.95	8	0	0	0	1	0	0		2006. 12. 135
205	16.86	7	0	0	0	1	0	0		2006. 12. 136
206	16.83	8	0	0	0	0	0	0		2006. 12. 137
207	15.23	7	0	0	0	0	0	0		2006. 12. 138
208	17.02	8	0	0	0	1	0	0		2006. 12. 139
209	17.06	8	0	0	0	0	1	0		2006. 12. 140
210	16.88	7	0	0	0	0	0	0		2006. 12. 141
211	16.89	7	0	0	0	1	0	0		2006. 12. 142
212	16.89	9	2	0	0	1	0	0		2006. 12. 143
213	16.94	6	0	0	0	0	0	0		2006. 12. 144
214	16.99	8	0	0	0	1	0	0		2006. 12. 145
215	17.05	8	0	0	0	1	0	0		2006. 12. 146
216	16.70	8	0	0	0	0	0	0		2006. 12. 147
217	16.61	8	0	0	0	1	0	0		2006. 12. 148
218	16.97	8	0	0	0	1	0	0		2006. 12. 149
219	16.70	8	1	0	0	1	0	0		2006. 12. 150
220	16.99	7	0	0	0	1	0	0		2006. 12. 151
221	16.96	8	0	0	1	0	0	0		2006. 12. 152
222	16.96	7	2	0	0	1	0	0		2006. 12. 153
223	16.65	7	0	0	0	1	0	0		2006. 12. 154
224	16.79	8	0	0	0	0	0	0		2006. 12. 155



Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
					obv.			rev.		
225	16.65	8	0	0	0	0	0	0		2006. 12. 156
226	17.01	7	0	0	0	1	0	0		2006. 12. 157
227	16.92	7	0	0	0	0	0	0		2006. 12. 158
228	16.69	8	1	0	0	3	1	1		2006. 12. 159
229	16.72	8	0	1	0	0	1	1		2006. 12. 160
230	16.88	7	0	0	0	1	0	0		2006. 12. 161
231	16.80	9	1	1	1	1	0	0		2006. 12. 162
232	16.24	8	0	0	0	0	0	0		2006. 12. 163
233	16.66	7	0	0	0	1	0	0		2006. 12. 164
234	16.54	8	0	0	0	1	0	0		2006. 12. 165
235	16.73	8	0	0	0	0	0	0		2006. 12. 166
236	16.51	9	0	0	0	1	0	0		2006. 12. 167
237	16.93	7	0	0	0	1	0	0		2006. 12. 168
238	15.12	7	0	0	0	0	0	0		2006. 12. 169
239	17.00	9	0	0	0	2	0	0		2006. 12. 170
240	16.85	8	0	0	0	1	0	0		2006. 12. 171
241	16.79	9	1	2	0	0	2	2		2006. 12. 172
242	16.95	9	0	0	0	0	0	0		2006. 12. 173
243	16.92	6	0	0	0	0	0	0		2006. 12. 174
244	17.01	8	0	0	0	0	0	0		2006. 12. 175
245	16.79	7	0	0	0	0	0	0		2006. 12. 176
246	16.83	7	0	0	0	1	0	0		2006. 12. 177
247	16.96	6	0	0	0	0	0	0		2006. 12. 178
248	16.85	7	0	1	0	0	0	0		2006. 12. 179
249	16.78	7	0	0	0	1	0	0		2006. 12. 180
250	16.89	7	0	1	0	0	0	0	Obv. linked to 1989 Syria no. 7	2006. 12. 181
251	16.99	9	0	0	1	0	0	0		2006. 12. 182
252	16.76	7	0	1	1	1	1	1		2006. 12. 183
253	17.00	8	0	2	1	1	1	1		2006. 12. 184
254	16.95	8	0	0	1	0	0	0		2006. 12. 185
255	16.90	7	0	0	0	0	0	0		2006. 12. 186
256	16.56	8	0	0	0	0	1	1		2006. 12. 187
257	16.86	9	0	0	2	0	0	0		2006. 12. 188
258	16.92	8	0	1	0	0	0	0		2006. 12. 189
259	16.91	7	0	2	0	2	2	2		2006. 12. 190
260	16.70	8	0	0	1	0	0	0		2006. 12. 191
261	16.91	7	0	0	0	0	0	0		2006. 12. 192

## A fourth century BCE hoard from the Near East

193

Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
					obv.			rev.		
262	16.72	7	0	1	0	0				2006. 12. 193
263	16.63	8	0	0	0	0				2006. 12. 194
264	17.12	7	0	0	1	0				2006. 12. 195
265	16.94	9	0	0	0	2				2006. 12. 196
266	16.55	8	0	0	1	0				2006. 12. 197
267	17.02	8	0	0	2	0				2006. 12. 198
268	16.84	9	0	0	0	0				2006. 12. 199
269	16.81	7	0	0	0	0				2006. 12. 200
270	17.00	7	0	0	0	0				2006. 12. 201
271	16.82	7	0	0	2	0				2006. 12. 202
272	16.93	8	0	0	0	0				2006. 12. 203
273	16.80	8	0	0	0	0				2006. 12. 204
274	17.03	8	0	0	1	0				2006. 12. 205
275	16.95	8	0	0	2	0				2006. 12. 206
276	16.92	7	0	0	2	0				2006. 12. 207
277	16.49	9	0	0	0	0				2006. 12. 208
278	16.74	7	0	0	2	0				2006. 12. 209
279	17.22	7	1	1	1	0				2006. 12. 210
280	16.84	9	0	0	0	0				2006. 12. 211
281	16.76	7	0	0	0	1				2006. 12. 212
282	16.97	8	1	0	1	0				2006. 12. 213
283	16.57	9	0	0	1	0				2006. 12. 214
284	16.52	6	0	0	2	0				2006. 12. 215
285	16.54	8	0	0	0	0				2006. 12. 216
286	16.94	8	0	0	1	0				2006. 12. 217
287	16.87	7	0	0	0	0				2006. 12. 218
288	16.93	8	0	0	1	0				2006. 12. 219
289	16.97	7	0	0	0	0				2006. 12. 220
290	16.91	7	0	0	0	1				2006. 12. 221
291	16.88	9	0	0	0	0				2006. 12. 222
292	17.05	7	0	0	0	0				2006. 12. 223
293	16.79	6	0	0	0	0				2006. 12. 224
294	16.74	8	0	0	0	0				2006. 12. 225
295	16.78	7	0	0	0	0				2006. 12. 226
296	16.36	8	0	0	1	0				2006. 12. 227
297	16.99	8	0	0	0	0				2006. 12. 228

joined

Cat. No.	Weight (g)	Axis	cut	obv. count.	cut	rev. count.	Notes	ANS No.
				obv.		rev.		
298	16.60	8	0	0	0	0	obv. linked to 2006. 12. 230	2006. 12. 229
299	16.81	8	0	0	0	0	obv. linked to 2006. 12. 229	2006. 12. 230
300	16.80	3	0	0	1	0		2006. 12. 231
301	17.01	7	0	0	1	0		2006. 12. 232
302	17.07	7	0	0	1	0		2006. 12. 233
303	16.95	8	1	0	1	0		2006. 12. 234
304	16.95	9	0	0	0	0		2006. 12. 235
305	16.51	9	0	0	1	1		2006. 12. 236
306	16.54	7	0	0	0	0		2006. 12. 237
307	17.04	7	0	0	0	0		2006. 12. 238
308	17.07	8	0	1	0	0		2006. 12. 239
309	16.91	8	0	0	1	0		2006. 12. 240
310	16.59	7	0	0	0	0		2006. 12. 241
311	16.89	6	0	1	2	0		2006. 12. 242
312	16.76	8	0	0	0	0		2006. 12. 243
313	16.92	7	0	0	0	0		2006. 12. 244
314	16.97	7	0	0	2	0		2006. 12. 245
315	16.38	8	0	0	0	0		2006. 12. 246
316	16.70	8	0	0	2	0		2006. 12. 247
317	16.89	7	0	0	0	0		2006. 12. 248
318	17.26	7	1	0	2	0		2006. 12. 249
319	16.82	8	0	0	2	0		2006. 12. 250
320	16.77	8	0	0	0	0		2006. 12. 251
321	16.74	9	0	0	1	0		2006. 12. 252
322	16.54	7	0	0	2	0		2006. 12. 253
323	16.71	7	0	0	0	1		2006. 12. 254
324	16.85	9	0	0	1	0		2006. 12. 255
325	16.99	7	0	0	1	0		2006. 12. 256
326	16.33	7	0	0	0	0		2006. 12. 257
327	16.70	7	0	0	1	0		2006. 12. 258
328	16.88	7	2	0	1	0		2006. 12. 259
329	16.90	7	0	0	0	0		2006. 12. 260
330	16.99	9	0	1	1	0		2006. 12. 261
331	16.91	7	0	0	0	0		2006. 12. 262
332	16.97	7	0	0	0	0		2006. 12. 263
333	16.89	7	0	0	1	0		2006. 12. 264

Cat. No.	Weight (g)	Axis	cut	obv. count.	cut rev. count.	Notes	ANS No.
				obv.	rev.		
334	17.04	8	0	0	0		2006. 12. 265
335	17.02	9	0	0	1		2006. 12. 266
336	16.96	7	0	0	1		2006. 12. 268
337	16.65	7	0	0	0		2006. 12. 269
338	16.61	8	1	0	1		2006. 12. 270
339	16.90	8	0	0	1		2006. 12. 271
340	16.84	7	0	0	2	recarved dies?	2006. 12. 272
341	17.02	8	0	0	2		2006. 12. 273
342	16.59	9	0	0	1		2006. 12. 274
343	16.57	8	0	0	1		2006. 12. 275
344	16.91	8	0	0	0		2006. 12. 276
345	16.49	7	0	0	1		2006. 12. 277
346	16.95	7	0	0	0		2006. 12. 278
347	17.01	11	0	0	1		2006. 12. 279
348	16.95	7	1	0	1		2006. 12. 280
349	16.98	6	0	0	1		2006. 12. 281
350	16.86	9	0	0	2		2006. 12. 282
351	16.91	7	0	0	0		2006. 12. 283
352	16.89	8	0	0	1		2006. 12. 284
353	16.99	9	1	0	1		2006. 12. 285
354	16.68	8	0	0	0		2006. 12. 286
355	17.09	7	0	0	0		2006. 12. 287
356	16.73	10	0	0	0		2006. 12. 288
357	16.24	9	0	0	0		2006. 12. 289
358	16.66	8	0	0	1		2006. 12. 290
359	16.87	7	0	0	1		2006. 12. 291
360	16.79	8	0	0	1		2006. 12. 292
361	16.50	9	0	0	4?		2006. 12. 293
362	16.91	7	0	0	0		2006. 12. 294
363	16.97	8	0	0	1		2006. 12. 295
364	16.56	7	0	0	1		2006. 12. 296
365	16.71	9	1	0	2		2006. 12. 297
366	16.63	9	0	0	1		2006. 12. 298
367	16.09	8	0	0	2		2006. 12. 299
368	16.88	7	0	0	0		2006. 12. 300
369	16.12	8	0	0	2		2006. 12. 302
370	17.32	9	1	0	1		2006. 12. 303
371	16.48	8	0	0	2		2006. 12. 304

Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
					obv.			rev.		
372	17.22	0	0	0	1	0				2006. 12. 305
373	17.21	9	0	0	1	0				2006. 12. 306
374	16.77	7	0	3	1 (small)	2				2006. 12. 307
375	17.23	8	0	0	1	0				2006. 12. 308
376	17.23	6	0	0	0	0				2006. 12. 309
377	17.35	9	0	0	0	0				2006. 12. 310
378	17.30	9	0	0	2	0				2006. 12. 311
379	17.45	8	0	0	0	0				2006. 12. 312
380	17.11	7	0	0	1	0				2006. 12. 313
381	16.84	7	0	0	0	0				2008. 15. 68
382	16.82	9	0	0	1	0				2008. 15. 69
383	16.81	9	0	0	4	0				2008. 15. 70
384	17.03	9	0	2	0	0				2008. 15. 71
385	17.08	8	0	0	0	0				2008. 15. 72
386	16.96	8	0	0	1	0				2008. 15. 73
387	16.97	8	0	0	1	0				2008. 15. 74
388	16.88	9	0	0	1	0				2008. 15. 75
389	16.56	8	0	0	0	2				2008. 15. 76
390	16.98	7	0	0	1	0				2008. 15. 77
391	16.89	8	0	0	1	0				2008. 15. 78
392	16.85	9	0	0	1	0				2008. 15. 79
393	16.74	7	0	0	0	0				2008. 15. 80
394	16.89	9	1	1	0	0				2008. 15. 81
395	17.08	8	0	0	1	0				2008. 15. 82
396	16.89	9	0	0	0	0				2008. 15. 83
397	16.73	8	0	0	2	0				2008. 15. 84
398	16.53	9	0	0	2	0				2008. 15. 85
399	17.02	8	0	0	2	graf: shin				2008. 15. 86
400	16.52	9	0	0	1	0				2008. 15. 87
401	16.96	8	0	0	1	0				2008. 15. 88
402	16.66	7	0	0	1	0				2008. 15. 89
403	16.90	7	0	0	1	0				2008. 15. 90
404	16.79	8	0	0	3	0				2008. 15. 91
405	16.94	8	0	0	1	0				2008. 15. 92
406	16.61	8	0	0	1	0	thick hammered edges			2008. 15. 93
407	17.42	7	0	0	1	0				2008. 15. 94

Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
					obv.			rev.		
408	16.87	7	0	0	0	0	0	0		2008. 15. 95
409	17.29	8	0	0	0	2	0	0		2008. 15. 96
410	16.91	6	0	0	0	0	0	0		2008. 15. 97
411	16.78	9	0	0	0	2	0	0		2008. 15. 98
412	16.79	6	0	0	0	1	0	0		2008. 15. 99
413	17.45	10	0	0	0	0	0	0		2008. 15. 100
414	16.87	6	0	0	0	1	0	0		2008. 15. 101
415	17.01	7	0	0	0	0	0	0		2008. 15. 102
416	16.92	6	0	0	0	1	0	0		2008. 15. 103
417	16.77	8	0	0	0	1	0	0		2008. 15. 104
418	16.89	9	0	0	1	1	0	0		2008. 15. 105
419	16.37	6	0	0	0	0	1	1		2008. 15. 106
420	16.18	8	0	0	1	0	0	0		2008. 15. 107
421	16.48	8	0	0	1	1	0	0		2008. 15. 108
422	17.03	6	0	0	0	1	0	0		2008. 15. 109
423	16.86	8	0	0	0	2	0	0		2008. 15. 110
424	16.53	7	0	0	0	0	0	0		2008. 15. 111
425	16.83	9	0	0	0	2	0	0		2008. 15. 112
426	16.78	8	0	0	0	1	0	0		2008. 15. 113
427	16.88	9	0	0	0	1	0	0		2008. 15. 114
428	16.80	8	0	0	0	1	0	0		2008. 15. 115
429	16.59	9	1	0	0	1	0	0		2008. 15. 116
430	16.67	8	0	0	0	0	0	0		2008. 15. 117
431	16.69	8	0	0	0	2	0	0		2008. 15. 118
432	16.97	8	0	0	0	1	0	0		2008. 15. 119
433	17.31	8	0	0	0	1	0	0		2008. 15. 120
434	16.86	8	0	0	0	0	0	0		2008. 15. 121
435	16.97	6	0	0	0	0	0	0		2008. 15. 122
436	16.77	9	0	0	0	0	0	0		2008. 15. 123
437	16.49	8	0	0	0	0	0	0		2008. 15. 124
438	17.05	7	0	0	0	1	0	0		2008. 15. 125
439	16.58	7	0	0	0	1	0	0		2008. 15. 126
440	16.95	8	0	0	0	0	0	0		2008. 15. 127
441	16.99	8	1	0	0	1	0	0		2008. 15. 128
442	16.87	8	0	0	0	1	0	0		2008. 15. 129
443	16.89	7	0	0	0	0	0	0		2008. 15. 130
444	16.70	8	0	0	0	1	0	0		2008. 15. 131
445	16.87	8	0	0	0	1	0	0		2008. 15. 132

Cat. No.	Weight (g)	Axis	cut	obv.	count.	cut	rev.	count.	Notes	ANS No.
				obv.			rev.			
446	16.97	8	0	0	1	0				2008. 15. 133
447	17.16	8	0	1	0	0				2008. 15. 134
448	16.98	8	0	0	2	0				2008. 15. 135
449	16.99	9	0	0	1	0				2008. 15. 136
450	16.73	9	0	1	1	0				2008. 15. 137
451	16.84	8	0	0	0	0				2008. 15. 138
452	16.98	9	2	0	0	0				2008. 15. 139
453	16.64	8	0	0	0	0				2008. 15. 140
454	16.76	8	0	0	1	2				2008. 15. 141
455	16.88	8	0	0	0	0				2008. 15. 142
456	16.95	7	0	0	1	0				2008. 15. 143
457	16.92	8	1	0	2	0				2008. 15. 144
458	16.65	8	0	0	1	0				2008. 15. 145
459	16.71	6	0	1	0	0				2008. 15. 146
460	16.70	9	0	0	0	0				2008. 15. 147
461	16.82	9	1	0	1	0				2008. 15. 148
462	16.95	8	graf: X	0	0	0				2008. 15. 149
463	16.61	8	0	0	0	0				2008. 15. 150
464	16.95	8	0	0	0	0				2008. 15. 151
465	16.68	8	0	0	1	0				2008. 15. 152
466	16.71	9	0	0	1	0				2008. 15. 153
467	16.87	9	1	0	1	0				2008. 15. 154
468	16.61	8	2	0	2	0				2008. 15. 155
469	16.25	8	0	0	1	1				2008. 15. 156
R1	16.79	8	1	0	0	0				
R2	16.76	8	0	0	0	0				
R3	16.61	7	0	0	0	0				
R4	14.73	8	0	0	1	0				
R5	16.72	7	0	0	0	0				
R6	16.85	8	0	0	0	0				

punch

## The Later Fourth Century BCE Coinage of Issos

PLATE 59

PETER G. VAN ALFEN\*

This study argues that a unique coin from a late fourth century Near Eastern hoard is from one of the last series of coins produced in Issos before the Macedonian take-over in 333 BCE.

A Near Eastern hoard of c. 330 BCE recently acquired by the American Numismatic Society (see Anderson and van Alfen 2008 this volume) includes a unique coin (Pl. 59, no. 1):

*Obv.*: Baal of Tarsus type seated on throne, l., holding staff in r. hand; at l., incense burner; at r., upward in Aramaic, *B'LDGN*; linear border

*Rev.*: Lion walking r.; above in Aramaic, *MZDY*; above and to r., symbol; *bet* below; border of dots

7.18 g; 11:00; obv. 1 cut

ANS 2008.15.24

Only one other published coin bears the Aramaic legend *B'L DGN*, a “didrachm” that came to light as part of the 1989 Syria hoard (*CH* 8.158; Price 1993; van Alfen 2002; Pl. 59, no. 2):

*Obv.*: Baal of Tarsus type seated on throne, l., head facing, holding staff to side in l. hand, wheatear and grape tendril in extended r. hand; at r., upward in Aramaic, *B'LDGN*; border of dots

\* [vanalfen@numismatics.org](mailto:vanalfen@numismatics.org)



Rev.: Lion seated r., head facing; to l. and r. *mem zayin*; border of dots  
 8.16 g; 12:00  
 Price (1993), no. 18; *NFA* (1990), 189

Since the 1989 Syria hoard was first recorded scholars have proposed a number of attributions and dates for this coin, nearly all of which lie geographically within the Persian satrapy Transeuphratene and chronologically within the last years of the 330s BCE: 1) Myriandros towards the end of 333 (*NFA* 1990, 189); 2) northern Syria between 334 and 330 (Mildenberg 1990/91: 19); 3) unknown minting location, c. 345 (Lemaire 1991: 49); 4) Hierapolis/Menbig c. 335 (Price 1993: 34).

While not exact in every detail, the shared *B'L DGN* legend and general obverse and reverse types, as well as what is arguably a shared weight standard (see below), make it certain that the "didrachm" from the 1989 Syria hoard and the new coin from the ANS Near East hoard are related issues. In what follows, I suggest that these two coins are among the last pre-Macedonian issues of Issos.

From as early perhaps as the last decade of the fifth century BCE, the mint at Issos produced several series of coins—at least one of which was produced under the Persian commander Tiribazus—that continued down to around the second quarter of the fourth century. James Brindley (1993) arranged these issues into six groups, the earliest of which (group I) he dated c. 405–400 BCE, and the latest (group VI) c. 380–370.<sup>1</sup> A combination of Semitic and Greek inscriptions (including the city's name in Greek on coins of group IV), symbols, and a repertoire of types tie all six groups together and make their attribution to Issos reasonably assured.

A ubiquitous character in Near Eastern iconography, the lion on the reverse of the earliest coins of Issos (Brindley's groups I and II, dated c. 400–395; Pl. 59, nos. 3–4) and on the reverse of the two "didrachms" cannot at the outset guarantee a civic link between the earlier and later sets of coins. Indeed, it was the seated lion that was key to Price's (1993: 33) attribution of the 1989 Syria "didrachm" to Hierapolis/Bambyce/Menbig, where a similar type was used on a series of silver fractions (c. 0.36 g) that are inscribed with the name of the local deity ('Ateh) and bear a symbol used on Hierapolis' coinage (Seyrig 1986: 180, no. 7; Pl. 59, no. 5). The link with the Hierapolis lion is tenuous, however. Seyrig expressed doubts that the lion and the sphinx had local significance,<sup>2</sup> and, in fact, had little regard for the indigenous creativity of the Hierapolis mint generally, which was prone, like many of

1. Brindley nowhere explains the basis for his dating of the groups, save group IV, which parallels issues produced elsewhere under Tiribazus. For this reason the dates should be taken cautiously.

2. He notes (1986: 180) that both the lion and sphinx "imité des monnaies de Byblos," but which Byblian issues he had in mind is far from apparent since none of the lions and sphinxes that appear on early Byblian issues are exact parallels.

the mints in the Fifth Satrapy (e.g., Samaria, Gaza, Ascalon, etc.), to borrow types from other mints in the region and imitate them in a derivative fashion: "Tout relève un atelier excentrique, éphémère, sans tradition technique ni répertoire de types" (1986: 172; cf. Lemaire 2000: 131). Price (1993: 33) also displayed hesitancy in attributing the 1989 Syria hoard coin to Hierapolis: "The engraver...is clearly more familiar with Greek style than other engravers at the Hierapolis Bambyce mint, and he might have been imported from Cilicia." Also worth considering is the fact that every issue of Hierapolis cataloged by Seyrig, including the fraction with the seated lion, was inscribed with the name of a local deity (e.g., 'Ateh) or bore the symbol  $\mathbf{\Xi}$  (or both). This is not the case for either of the two "didrachms." It would seem instead that the use of an unusual style for Hierapolis and the lack of the usual inscriptions and symbols together argue against Price's attribution. It was the "typology and superior style" of the coin that suggested Myriandros to the NFA cataloguer, an attribution which was likely based on the since refuted attribution of the Tarsian lion staters to that city (see n. 3). The other attributions for the 1989 Syria hoard coin are cautiously vague, as we have seen: "northern Syria," "unknown." The ANS coin offers new clues that help steer us towards Issos.

As noted, single lions (to right), whether attacking or striding, sometimes with heads facing, appear on staters of Issos in Brindley's groups I and II and (to left) on the related fractional coinage of sixteenths (c. 0.62 g) and thirty-seconds (0.31 g) (Pl. 59, no. 6). An affinity between the lion reverse type on Brindley's groups I and II, the lions on the "didrachms," as well as those found on later fourth century Cilician "lion staters" (e.g., *SNG Levante* nos. 185–188; Pl. 59, no. 7) is clear. Equally clear, thanks to the inscribed name on the reverse of the ANS coin, is the Persian nobleman Mazday's (Greek Mazaïos) responsibility for all of the later lion coinages, the "didrachms" and the lion staters.

Where Mazday's lion staters were minted has long been an issue of contention, but the consensus now favors production in Tarsus shortly before the Macedonians arrived in the region.<sup>3</sup> The ANS coin, and to a degree the 1989 Syria coin, are so close in most typological respects to the Tarsian lion staters that an attribution

3. Assigned by Hill (1900: 172) to Tarsus, Newell's (1920: 15–29) attempt to reassign them to Myriandros did not meet with universal acceptance. More recently Bing (1989) sought to reattribute all of Newell's "Myriandros" coinage, including the lion staters, to Issos, a program that has received mixed reviews. While some of the earlier issues, like Brindley's group I coinage and the later Alexander-type issues seem confirmed, the attribution of the lion staters to Issos has not been well received. A host of scholars, e.g., Mildenberg (1990/91: 12); Price (1991: 401); and Casabonne (2004: 207–223) have refuted Newell and Bing, siding instead with the original attribution to Tarsus. Harrison (1982: 361–370) likewise refutes Myriandros, but suggests a "mint somewhere in the interior" of northern Syria (370).

to Tarsus might seem plausible as well except that both the “didrachms” would be highly anomalous within the Tarsian lion stater series. Like Mazday’s other Tarsian coinage, the lion staters consistently name their seated deity *B’L TRZ* (Ba’al of Tarsus). Also, the lion on these *B’L TRZ* staters always faces to the left. A more important consideration than deity title and lion orientation, however, is the fact that the weights of the “didrachms” do not fit within the “Persic” weight standard of c. 10.7 g used for the lion staters and all other coins minted at Tarsus right up until the moment of capitulation to the Macedonians.<sup>4</sup> Indeed, Tarsus has never been seriously entertained as the mint for the 1989 Syria hoard coin. Lemaire’s (1991: 49–51; 2000: 130–31) analysis of the inscription *B’L DGN* also discounted the possibility that *DGN* could, like *TRZ* on the lion staters, be a toponym. Instead he concluded that *B’L DGN* was likely a civic deity (“Baal who is Dagan,” *vel sim.*) worshiped in one of the communities within Mazday’s control, which by the 330s included both the Fifth Satrapy and Cilicia (Casabonne 2004: 207–210). We shall return to the problem of *B’L DGN* below.


Although the weight of the “didrachms” does not conform to the early fourth-century issues of Issos, which likewise used the Persic standard in the production of Brindley’s groups I–VI, the lion was, at least in the history of the community’s mint, an important early type, appearing on coinage there long before it appeared on other coins in the region.<sup>5</sup> Brindley (1993: 2, n.9) has already suggested that the lion type was resurrected at Issos in the later fourth century for a series of “obols of Mazaeus’ time” (*SNG Levante*, nos. 189–90; Pl. 59, nos. 8–9), showing lions to left with facing heads similar to those of his group II. The Ahura Mazda in the field above these lions finds parallels on coins of Brindley’s group IV, but also on coins of Hierapolis (e.g., ANS 2000.3.1) and earlier coins of Tarsus under Tarkumuwa (“Datames,” e.g., ANS 1977.158.561) and so is of no aid in confirming the attribution.<sup>6</sup> The inscription next to the seated deity on the obverse is also of

4. On the adoption of the “Persic” standard in Cilicia see Casabonne (2004: 103–105). The theoretical weight of a Persic stater is 10.7 g, double the Persian siglos of 5.35 g.

5. Besides Brindley’s groups I and II still earlier coins of Issos with a lion may exist if Six’s (1888: 114–121) attribution of a series of anepigraphic Persic weight staters (e.g., ANS 1944.100.54079, 10.92 g) and their fractions (cf. Baldwin’s 34 2003, lot 394) is correct. Six based his attribution on still another series with lion forepart obverse, man slaying lion reverse (cf. *BMC Lycia* pl. xlv, 19). Brindley (1993: 1, n.3) claims that the attribution of the anepigraphic staters is “unfounded” without further explication. Interestingly, in the sale of his collection (Baldwin’s 34 2003, lots 393, 394) a stater and fraction (1.46 g) of this series are attributed to Issos. Newell (1914: 14) noted that the attribution of this series to Issos “is still conjectural, but is supported by the presence of the piece in this particular hoard” (i.e., *IGCH* 1259). I leave the question of attribution open.

6. However, the “crossed pellet device” that appears above the lion on Brindley’s group II,


no help; it reads simply *MZDY*, offering no further geographical clues beyond the Fifth Satrapy and Cilicia generally. A third coin, *SNG Levante*, no. 191 (0.70 g; Pl. 59, no. 10), appears closest to a fractional version of the *ANS* coin with its striding lion to right and a seated deity on the obverse; but the inscription, if one exists, is off flan. The coin's types are equally those of Tarsus, so nothing further can be said about this fraction's attribution.

The lions aside, the case for attributing the "didrachms" to Issos gains further ground from the presence—just visible to the right of the lion's chest—on the new *ANS* "didrachm" of an ankh-like symbol. This symbol, , which scholars have long recognized as having special associations with Issos, appears prominently on coins from Brindley's group V (1993: 7; Pl. 59, no. 11) and on later Alexander-type issues of Issos (Bing 1989: 29; 1991: 163).<sup>7</sup> Moreover, above the lion's head on the *ANS* coin is a symbol resembling, although not exactly, the "crossed pellet" above the lion on Brindley's group II staters (1993: 2; pl. 1, B; Pl. 59, no. 4; cf. n. 6 below).

If the attribution of the two "didrachms" to Issos is now accepted, we are left with additional problems to consider, namely the significance of *B'L DGN*, the relationship of this coinage to the Tarsian lion staters, and the weight standard.

Numismatists in the late nineteenth century like Babelon (1891: 293–94; 1893: CLV; 1910: 509) and Six (1877: 184) were keen to identify the ichthymorphic deity on the obverse of Brindley's group I coins and on the first coins of Aradus as *DGN*. Their attributions were based on one of two competing etymologies of the deity's name. In his biblical commentaries, St. Jerome offered an etymology of *DGN*, *pi-scis tristitiae*, based on Semitic *DG* ("fish"), which was repeated in the medieval Jewish commentaries of Rashi and Kimchi, and so made its way into nineteenth century scholarship. If *DGN* could be construed as a fish-god based on this etymology, his visual representation as half-man, half-fish thus seemed natural. A second etymology, predating Jerome and found in the works of Philo of Byblos, posits *DGN* ("grain") as the root encouraging a connection with fertility, and discouraging any association between the deity and the sea. By the late 1910s scholars were beginning to move away from the fish etymology, a shift that culminated in Hartmut Schmökel's strong denunciation of *DGN* as a fish-god. The shift pushed

and perhaps on the new *ANS* coin, seems in some instances (e.g., Baldwin 34 (2003), lot 400) to be rather close to a basic representation of Ahura Mazda.

7. A number of ankh-like symbols are found on coinage produced at mints in and around Cilicia, which were assembled and discussed by Babelon (1910: 349), who assigns specific ankh-types to the mints Issos, Mallos, Soli, and Tarsus. Babelon, and Imhoof-Blumer before him (1902, vol. 2: 450), assign the symbol  to Issos. While the assignation of each symbol to a particular mint seems correct, the function of the symbol, whether a mintmark, magistrate's mark, *vel sim.*, remains unresolved. See Moysey (1986: 10–11) and Casabonne (2004: 172–173).

numismatists like Newell (1920: 28) to back off from naming ichthymorphic deities on coinage Dagan. So it remains to this day.<sup>8</sup>

Recently, Elayi and Elayi (2001) traced the evolution of the representation of Aradus' ichthymorphic deity on coinage. As was the case in other Phoenician cities, they note a progressive reduction in the maritime aspects of the deity over time. Through the course of the fifth and fourth centuries the Aradians depict their civic deity, a Ba'al with indigenous attributes, gradually losing its fish tail and other marine attributes as the representation became more terrestrial and anthropomorphic, seemingly due to greater assimilation with Milqart/Herakles. At Issos, the coins suggest a similar progression, only one that was more dramatic. The ichthymorphic deity on Brindley's group I coins was replaced wholesale by Herakles on group II coins. Herakles, along with Apollo, Athena, and Ahura Mazda, were the divinities to appear subsequently on the coinage of Issos, the ichthymorphic deity apparently long forgotten, or completely subsumed by one of the other deities.

Evidence for religious practice at Issos in the fifth and fourth century is slim. Curtius Rufus records both that before the battle of Issos Alexander sacrificed to the local protecting divinities, and that following the battle he built three altars one each to Jove, Hercules, and Minerva on the banks of the Pinarus River, a site later known as the Hieron.<sup>9</sup> Bing (1991) argues that we are to understand the *dis praesidibus loci* of the earlier passage as the recipients of the altars: Ba'al Tarz/Tarhunus ("Jove"), Nergal/Resheph/Runzas ("Hercules"), and 'Anat/Ishhara ("Minerva"). Bing arrived at these identifications of the presumed Issian divinities by searching for evidence within the region of Cilicia for deities that might correspond both to those named by Curtius and to those appearing on the coinage of Issos. While Bing's identification of "Hercules" and "Athena" are supported by Issian coinage, he is compelled to turn to Tarsus for the "Jove" figure, naming Issos' Jove Ba'al Tarz.<sup>10</sup>

8. Day (2000: 86–90) provides the most recent discussion of the etymology and attributes of (B'L) DGN, roundly discounting attempts by Hotler (1989) to keep open the possibility of DGN as a fish-god. Elayi and Elayi (2001: 141) discuss then dismiss the possibility of DGN as the deity depicted on the coins of Aradus. Note that Meshorer and Qedar (1999: 37) illustrate a coin of Aradus naming the deity "Dagon," without providing their justification for doing so. Philo of Byblos (apud Eusebius *Praeparatio Evangelica* 1.10.16, 1.10.25) refers to *Dagon hos esti Siton* ("Dagon who is Grain"), and Dagon as Zeus Arotrios ("Zeus Ploughman"). Schmökel wrote his 1928 dissertation at Leipzig on Dagon, and produced the early 1930s entry on Dagon in the *Reallexicon der Assyriologie*.

9. Curtius III.8.22: 'Ipse in iugum editi montis escendit multisque collucentibus facibus patrio more sacrificium dis praesidibus loci fecit.' III.12.27: 'Tribus aris in ripa Pinari amnis Iovi atque Herculi Minervaeque sacratis...' Hieron: *Stadiasmus Maris Magni*, no. 154 in C. Müller, ed. *Geographi Graeci Minores*, i 477.

10. Lemaire (2000: 131) notes that the identification of B'L TRZ with Zeus/Jove is explicitly confirmed by Samarian coins, e.g., Meshorer and Qedar (1991), nos. 18, 24, 51.

Casabonne (2004: 136) found fault with Bing's refuge in this distinctly non-Issian Ba'al, noting that Curtius' *patrio more* insists we look for an Issian solution to the identification. The obvious solution, Casabonne suggests, is the ichthymorphic deity on Brindley's group I coinage, perhaps to be identified with the divinity Yam/Yom ("Ocean"), to whom the Hittite queen Puduḫhepat sacrificed at Issos.

Direct evidence for the identification of an Issian Jove, *B'L DGN*, is now provided by the "didrachms," whose iconography on the coins puts him on par with *B'L TRZ*. Assuming *B'L DGN*'s cult at Issos and his civic importance predated the later fourth century, can we then draw a line between the *B'L DGN* of the "didrachms" and the ichthymorphic deity on Brindley's group I? One problem, of course, in (re-)proposing that the ichthymorphic deity and *B'L DGN* are the same is the conflict with the long denounced *DG* ("fish") etymology for *DGN*. However, earlier numismatists made the assumption, like many before them, that the etymology of the name would be the key, determinative factor in how the god or his attributes would be represented. The *DG* etymology may indeed be wrong, and *DGN*'s representation in places like Gaza may never have been fish-like, but this does not automatically preclude the representation of *B'L DGN* as half-man, half-fish, with a trident in hand, for Issos, "the last city in Cilicia, a place situated on the sea, large and prosperous" (Xen. *Anab.* I.IV.1), a community that no doubt derived much of its prosperity from maritime activity. Ba'al, after all, was a multifarious, multi-formed deity. Nor should we forget that the Aradians, an equally maritime and prospering people, depicted their civic Ba'al with a fish tail.

The second problem, of course, is the change in the representation of the deity, from god-fish to god-enthroned, but as we have already seen in the case of Aradus, an earlier maritime representation of the deity could well have given way to one that was more terrestrially oriented. More significantly, however, the representation of *B'L DGN* might have been heavily influenced, as indeed seems to be the case, by the representation of *B'L TRZ*. The fact that Mazday signed both the *B'L DGN* and *B'L TRZ* coinages further suggests a deliberate regularization in the way in which the two neighboring Ba'als were portrayed on two closely related coinages.

If the enthroned *B'L DGN* and the ichthymorphic deity on Brindley's group I coins are one and the same, the new ANS "didrachm" signals a complete resurrection of the earlier types, *B'L DGN* obverse, lion to right reverse. We do not know enough about Issos in the fourth century to gauge the political or social significance of this restoration; the connection to Mazday, however, allows us to speculate on the economic function of the coinage.

Casabonne's (2004: 223, n.941) suspicion that the *mem* and *zayin* on the Syria hoard didrachm were the first two letters of Mazday's name, thus indicating his control over the coinage, has now been confirmed by the ANS example, where the Persian's name is fully spelt out. Mazday's oversight of the production of coin-

age at Tarsus lasted for a generation and resulted in six series, including the lion staters, produced between c. 360 (or 350) and c. 333 BCE. He also controlled coinage produced at other locales within Transeuphratene, as issues inscribed with his name from Sidon (Elayi and Elayi 2004), Hierapolis/Menbig (Lemaire 2000: 136; pl. XVI, 9a–b; Casabonne 2004: 210; pl. 5.3), and Samaria (Mildenberg 1990/91: 14–15; Casabonne 2004: 221) demonstrate; to these three Fifth Satrapy mints under Mazday we may now add Issos. Mazday's precise title (satrap or *karanos*?) is lost to us, as are the dates when he assumed control of Cilicia and the Fifth Satrapy (cf. Le Rider 1997: 159–163; Lemaire 2000; Casabonne 2004: 220), but from the time he first appeared in the Levant, he seems to have been heavily involved in the management and financing of the Persian attempts to put down rebellions in Phoenicia, Cyprus and Egypt. Casabonne (2004: 220–223) has argued that the diversity of Mazday's issues in Cilicia and Transeuphratene is to be explained by his role in financing these three campaigns out of imperial and civic treasuries.

Since Mazday relinquished power in Cilicia in the face of the Macedonian assault to take up duties farther east, we may assume that all his signed issues in the Levant came to an end by c. 333 BCE. The close parallels between the Issian and Tarsian lion coinages, down to the changing details of the linear and dot borders, the presence or absence of the wheatear and grape tendril on the obverse and the use of an incense burner as a symbol, suggest that the two coinages were not only contemporaries but also simultaneously planned. The Tarsian lion staters are thought to be among the very last Persian issues of Cilicia before Alexander's conquest (Casabonne 2004: 215–16), which may explain why Mazday chose the types when he resumed minting lion staters in Babylon under Alexander's hegemony (Casabonne 2004: 210). Production in the mid-330s for both series of lion staters thus seems possible. Despite their presumably planned identical appearance, both the Tarsian and Issian lion series could be readily distinguished by the orientation of the lion and the deity's name, a rather important concern in light of the significant difference in the weight standards used.

Even with the nearly full gram difference in weight between the two Issian lions, both coins were likely meant to conform to a weight standard in use at Menbig-Hierapolis, where Seyrig (1986: 172) observed coins on the standard oscillating between 7.95 and 8.55 g, and at Tyre where at some point c. 350 BCE a similar standard of c. 8.5 g was adopted for the last three series of coins before Alexander's conquest (Betylton 1982: 53; series V–VII). Both Seyrig and Betylton thought this standard was Attic; for Seyrig it meant also that the coins could only have been minted after capitulation to Alexander and his use of the Attic standard for his own coinage. Price (1993: 32) is likely closer to the mark, suggesting that coins minted on this standard were not Attic didrachms, but rather Babylonian shekels. While the lack of evidence does not allow us to say much on this matter, we can

note that the use of multiple standards by Mazday for his signed coinage (the Persian at Tarsus, the Babylonian (?) shekel at Issos and Hierapolis, and the Sidonian shekel), none of which were immediately compatible, indicates at the very least how the financial management of Cilicia and Transeuphratene was fragmented in its particulars, even if unified at the top. Indeed, the lions of Issos and Tarsus demonstrate this to a tee.

### KEY TO PLATE 59

1. ANS 2008.15.24
2. Numismatic Fine Arts (1990), lot 189
3. Brindley (1993), pl. 1, A
4. Brindley (1993), pl. 1, B
5. Seyrig (1986), pl. II, no. 7
6. Baldwin's 34 October 2003, lot 399
7. SNG Levante, no. 155
8. SNG Levante, no. 189
9. SNG Levante, no. 190
10. SNG Levante, no. 191
11. Brindley (1993), pl. 1, 9

### REFERENCES

- Anderson, L. and P. G. van Alfen. 2008. A fourth century BCE hoard from the Near East. *American Journal of Numismatics* 20: 155–198.
- Babelon, E. 1891. Aradus. *Revue Numismatique* 9: 283–314.
- . 1893. *Les Perses achéménides*. Paris: C. Rollin & Feuardent.
- . 1910. *Traité des monnaies grecques et romaines*. Part II, vol. II. Paris: Ernest Leroux.
- Betlyon, J. W. 1982. *The coinage and mints of Phoenicia: the pre-Alexandrine period*, Harvard Semitic Monographs 26.
- Bing, J. D. 1989. Reattribution of the 'Myriandrus' Alexanders: the case for Issus. *American Journal of Numismatics* 1: 1–32.
- . 1991. Alexander's sacrifice *dis praesidibus loci* before the Battle of Issus. *Journal of Hellenic Studies* 111: 161–65.
- Brindley, J. 1993. Early coinage attributable to Issus. *Numismatic Chronicle* 153: 1–10.
- Casabonne, O. 2004. *La Cilicie à l'époque achéménide*. Paris: De Boccard.
- Day, J. 2000. *Yahweh and the gods and goddesses of Canaan*. Journal for the Study of the Old Testament Supplement Series 265. Sheffield: Sheffield Academic Press.
- Elayi, J. and A. G. Elayi. 2001. La divinité marine des monnaies préalexandrines d'Arwad. *Transeuphratène* 21: 133–148.



- . 2004. Le monnayage sidonien de Mazday. *Transeuphratène* 27: 155–162.
- Harrison, C. M. 1982. *Coins of the Persian Satraps*, Ph.D. diss., University of Pennsylvania.
- Hill, G. F. 1900. *Catalogue of the Greek Coins of Lycaonia, Isauria, and Cilicia*. London: British Museum.
- Holter, K. 1989. Was Philistine Dagon a fish-god? Some new questions and old answers. *Scandinavian Journal of the Old Testament* 1: 142–47.
- Imhoof-Blumer, F. 1902. *Kleinasiatische Münzen*. Alfred Hölder: Vienna.
- Lemaire, A. 1991. Notes d'épigraphie nord-ouest sémitique. *Semitica* 40: 39–54.
- . 2000. Remarques sur certaines légendes monétaires Ciliciennes (Ve-IVe s.av. J.-C.). In *Mécanismes et Innovations Monétaires dans l'Anatolie Achéménide: Numismatique et Histoire. Actes de la Table Ronde Internationale d'Istanbul, 22–23 mai 1997*, O. Casabonne, ed., pp. 129–141. *Varia Anatolica* XII.
- Mildenberg, L. 1990–91. Notes on the coin issues of Mazday. *Israel Numismatic Journal* 11: 9–23.
- Le Rider, G. 1997. Le monnayage perse en Cilicie au IV<sup>e</sup> siècle. *Numismatica e Antichita Classiche* 26: 151–169.
- Meshorer, Y. and S. Qedar. 1991. *The coinage of Samaria in the fourth century BCE*. Jerusalem: Israel Numismatic Society.
- . 1999. *Samaritan coinage*. Jerusalem: Israel Numismatic Society.
- Moysey, R. A. 1986. The silver stater issues of Pharnabazos and Datames from the mint of Tarsus in Cilicia. *American Numismatic Society Museum Notes* 31: 7–61.
- Newell, E. T. 1914. A Cilician find. *Numismatic Chronicle* 14: 1–33.
- . 1920. *Myriandros Alexandria Kat'Isson*. New York: American Numismatic Society.
- Price, M. J. 1991. *The coinage in the name of Alexander the Great and Philip Arrhidaeus*. Zurich/London: Swiss Numismatic Society and British Museum Press.
- . 1993. More from Memphis and the Syria 1989 hoard. In *Essays in honor of Robert Carson and Kenneth Jenkins*, M. Price, A. Burnett, and R. Bland, eds., pp. 32–35. London: Spink and Sons.
- Seyrig, H. 1986. Monnaies hellénistiques. In *Scripta Numismatica*, H. Seyrig, ed., pp. 167–181. Paris: Paul Greunther.
- Six, J. P. 1877. Observations sur les monnaies phéniciennes. *Numismatic Chronicle* 17: 177–239.
- . 1888. Monnaies grecques, inédites et incertaines. *Numismatic Chronicle* 8: 97–137.
- Van Alfen, P. G. 2002. The 'owls' from the 1989 Syria hoard with a review of pre-Macedonian coinage in Egypt. *American Journal of Numismatics* 14: 1–58.

## NIKA, ΛΕΙΑ: Graffiti on Sicyonian and Theban Staters in a New Hoard from Boeotia / Beginning of 2000

PLATES 60–61

KATERINI LIAMPI\*

Graffiti on five coins from a recent hoard present a narrative recording, most likely, a dedication of victory spoils to an unknown deity by Macedonians following the Battle of Chaeronea in 338 BC.

A new hoard, comprising fourteen silver coins, four Sicyonian and ten Theban, was discovered at the beginning of 2000 in Boeotia. According to one unverifiable source of information, it was found near a sanctuary of unknown identity. It is not absolutely certain that the fourteen staters form the entire hoard. It is certain, however, that they all belong together, since, having not been cleaned, we can observe that the patina is the same on all the coins. Strong oxidation (green color) on the periphery of one of the coins shows that it had been in contact with copper and suggests that all the coins had been placed in a bronze vessel or had been in contact with a bronze object. The lack of information about the circumstances of discovery leaves no room for further speculation. The earliest coins may be dated in the last thirty years of the fifth century BC, the latest to around 338 BC.

Apart from the general interest presented by the study of such a find for numismatic reasons, observable on five of these staters is a rare and important feature: graffiti, written somewhat clumsily by the ancient owners of the coins with a fine, sharp-pointed tool, giving their names. This alone, however, did not suffice, so they inscribed in addition two more pieces of information in which, as we shall see, they took great pride.

\* kaliampi@cc.uoi.gr

## CATALOGUE

## Sicyon

*Staters**(c. 431–400 BC)**Obv.* ΣΕ; Chimaera moving l.*Rev.* Dove flying l., above tail, Δ; all in olive wreath tied on the r.

1. 11.62 g, 8 h, Pl. 61, 1

*Obv.* Traces of blue tone on the field.*Rev.* Traces of blue tone on the wreath.*BMC* (Sicyon) 54; Svoronos 1916, nos. 1417–1419; Leu 96, 8 May 2006 (Collection BCD), no. 188.*Obv.* ΣΕ; Chimaera moving r. on ground line.*Rev.* As above, without letters.

2. 11.84 g, 12 h, Pl. 61, 2

*Obv.* and *Rev.* Traces of blue tone on the field.

Leu 96, 8 May 2006 (Collection BCD), no. 200.2.

*Obv.* ΣΕ (retrograde); as above.*Rev.* Dove flying r.; all in olive wreath tied on the left.

3. 10.73 g, 5 h, Pl. 61, 3

*Obv.* Deep depression adjacent to the spine of the Chimaera.*Rev.* Traces of green tone on the periphery of the coin.

Leu 96, 8 May 2006 (Collection BCD), no. 203.4.

*(c. 360s/350s BC)**Obv.* Σ / Ε; Chimaera moving l. on ground line; below Chimaera and partially over the groundline, nude archer (Apollo?) kneeling l., shooting with bow.*Rev.* As above; above, tail, ΠΑ.

4. 11.89 g, 2 h, Pl. 61, 4

*Obv.* Graffito under the groundline: ΑΕΙΑ.*Rev.* Deep depression in the lower wing of the dove.Leu 96, 8 May 2006 (Collection BCD), no. 221.2. See also variety *BMC* (Peloponnesus) 64 (*Rev.* Dove flying l.).

Thebes<sup>1</sup>*Staters**I. With Ethnic**(c. 425–400 BC)**Obv.* Boeotian shield.*Rev.* ☉-E; volute amphora; all in square incuse.

5. 11.95 g, 12 h, Pl. 61, 5

*Obv.* Die break in the rim of the shield lower l.*Rev.* Graffito NI-KA (N retrograde).Head 1974<sup>2</sup>, p. 36, Period VI, class γ, pl. III, no. 8; Svoronos 1916, nos. 160–174; Phoungas 1986, nos. 38b–40; Triton IX, 10 January 2006 (Collection BCD), nos. 386–387.*Obv.* As above.*Rev.* As above, to l. bunch of grapes on vine.

6. 11.95 g, 12 h, Pl. 61, 6

*Obv.* Traces of blue tone on the inner side of the rim of the shield.*Rev.* Traces of blue tone on the field. *Obv.* Die breaks in the rim of the shield above r. and below. *Rev.* Die break next to the amphora r.

Svoronos 1916, nos. 253–257; Phoungas 1986, no. 52; Triton IX, 10 January 2006 (Collection BCD), no. 396.

*Obv.* As above.*Rev.* [☉]-E; as above, to r. bunch of grapes on vine.

7. 11.66 g, 12 h, Pl. 61, 7

*Obv.* Small cut, shaped like a crescent. *Obv.**Rev.* Not well centered. *Rev.* Die break in the rim of the amphora r.Head 1974<sup>2</sup>, p. 37, Period VI, class γ; Svoronos 1916, nos. 258–268; Phoungas 1986, no. 51b; Triton IX, 10 January 2006 (Collection BCD), no. 398.

1. Collections are not cited as they are included in the studies of Head (1974), Phoungas (1986), and in the work of Hepworth (1998); cited, however, is the catalogue of Svoronos (1916) for the hoard of Myron/ Karditsa 1914 (IGCH 62).

*II. With Magistrate Names**(c. 390–382 BC)**Obv.* Boeotian shield.*Rev.* ΔA-MO; volute amphora, two ivy leaves and berry hanging from left handle, above, club left; all in incuse concave circle.

8. 12.05 g, 9 h, Pl. 61, 8

*Rev.* Graffito A.Head 1974<sup>2</sup>, p. 64, Period IX, pl. V, no. 3; Svoronos 1916, nos. 621–644; Phoungas 1986, no. 139a; Hepworth 1998, p. 63, group A, table IV, no. 21; Triton IX, 10 January 2006 (Collection BCD), no. 490.*(c. 390–382 BC)**Obv.* As above.*Rev.* FA-ΣT; as above; above, barley grain right.

9. 11.76 g, 9 h, Pl. 61, 9

*Obv.* Die breaks in the rim of the shield r.*Rev.* Graffito ONA-ΣIM. *Obv.* and *Rev.* Traces of blue tone.Head 1974<sup>2</sup>, p. 64, Period IX, pl. V, no. 4; Svoronos 1916, nos. 540–586; Phoungas 1986, no. 135a; Hepworth 1998, p. 63, group A, table VI, no. 36, Pl. 61, A4; Triton IX, 10 January 2006 (Collection BCD), no. 494.*Obv.* As above.*Rev.* [F]A-ΣT; as above; above, bucranium.

10. 12.09 g, 2 h, Pl. 61, 10

*Obv.* Not well centered on a large flan.*Rev.* Deep depression in the upper left periphery of the coin.Head 1974<sup>2</sup>, p. 64, Period IX; Svoronos 1916, nos. 528–531; Phoungas 1986, no. 135d; Hepworth 1998, p. 63, group A, table VI, no. 37; Triton IX, 10 January 2006 (Collection BCD), no. 498.*(c. 379–368 BC)**Obv.* As above.*Rev.* ΨA-RO; as above; above, laurel wreath.

11. 11.88 g, 8 h, pl. 1, 11

*Obv.* Die breaks in the rim of the shield, especially at lower right.Head 1974<sup>2</sup>, p. 66, Period IX, pl. V, no. 1; Svoronos 1916, nos. 963–972; Phoungas 1986, no. 74a; Hepworth 1998, p. 64, group B, table XIV, no. 93; Triton IX, 10 January 2006 (Collection BCD), no. 508.

*Obv.* As above.

*Rev.* [Ψ]Α-ΡΟ; as above; above, ivy wreath with berries.

12. 12.18 g, 1 h, Pl. 61, 12

*Obv.* Traces of blue tone on the field.

*Rev.* Traces of blue tone on the wreath. *Obv.* and *Rev.* Not well centered.

Head 1974<sup>2</sup>, p. 66, Period IX; Svoronos 1916, nos. 957-962; Phoungas 1986, no. 74b; Hepworth 1998, p. 64, group B, table XIV, no. 94.

(c. 368–364 BC)

*Obv.* As above.

*Rev.* ΚΑ-ΙΩ; as above; without symbol.

13. 12.10 g, 1 h, Pl. 61, 13

*Rev.* Graffito Ν. *Obv.* Traces of blue tone on the rim of the shield.

Head 1974<sup>2</sup>, p. 65, Period IX; Svoronos 1916, nos. 809-827; Phoungas 1986, no. 153a; Hepworth 1998, p. 65, group C, table X, no. 69, pl. 3; Triton IX, 10 January 2006 (Collection BCD), no. 531.

(c. 363–338 BC)

*Obv.* As above.

*Rev.* Α-Σ / Ω; as above; to lower r., bunch of grapes.

14. 12.24 g, 12 h, Pl. 61, 14

Head 1974<sup>2</sup>, p. 64, Period IX; Phoungas 1986, no. 136a; Hepworth 1998, pp. 65–66, group D, table III, 15, pl. 6; Triton IX, 10 January 2006 (Collection BCD), no. 579.

The staters of Sicyon, struck on the Aeginetan weight standard, have on the obverse the Chimaera and on the reverse a dove in a wreath. All come from different obverse and reverse dies, and their axes vary. Two coins (1–2) show traces of blue tone on their surfaces. The earliest coin (1) shows some wear from use, whereas the other coins (2–4) are very well preserved. Damage is seen only on the reverse of a single stater (3), which has strong traces of green oxidation, probably as a result of contact with copper.

Sicyon<sup>2</sup> inaugurated its mint with a silver coinage early in the fifth century BC and continued, without serious interruption, down to the late first century BC and on into imperial times.<sup>3</sup> A significant mass production of staters occurred late

2. For the history of Sicyon, see Skalet (1975, 55–107), Lolos (1998, 46–70, with earlier bibliography), Balla (2003, 87–94), Legon (2004, 468–470).

3. *BMC* (Peloponnesus) pp. 36–56; *Traité* II.1, nos. 1183–1187 and II.3, nos. 736–815; *SNG Cop.* 18–124; Skalet (1975, 52–53, 78, 84, 101). See also the Catalogue Leu 96, 8 May

in the fifth century BC, against the backdrop of the Peloponnesian War. This was probably in order to contribute, on the city's behalf, to the funding of the Peloponnesian League, which in any case was in great financial need, as we know from Thucydides (1.121.3). The date proposed for the initiation of this issue is around 431 or 430/20 BC, with a termination around 400 BC.<sup>4</sup> This was the period during which the staters of Sicyon, rather than those of Corinth, overtook the circulation of the Aeginetan coins that had been popular in the Peloponnese. Between the fifth and the fourth centuries BC, there appears to have been a gap in production, although it is always possible that some of the coins thought to be datable to the end of the fifth century BC, when their production was greatly reduced, were struck in 390/80 BC. Sicyonian staters of this period were found in the Myron/Karditsa hoard 1914 (*IGCH* 62), the burial time of which is placed by scholars today at around 364 BC.<sup>5</sup> Their production is thought to have ceased before the hoard was hidden. The next issue of staters by Sicyon occurs in the fourth century BC, after the deposit of the Myron hoard in the second and third quarter of the century, specifically between 365 and 330 BC.<sup>6</sup> From the end of the third quarter of the fourth century on into the third century BC, a great many triobols, silver fractions, and bronzes were struck.<sup>7</sup>

Three of the staters represented in our hoard (1–3) were issued during the first period (c. 436–400 BC). One stater (4) is of considerably later date, from the phase of coinage that postdates the Myron/Karditsa hoard. This is the stater where the nude figure (Apollo?) kneeling l., shooting with his bow, has slipped in as symbol on the obverse. Shown on all the staters of our hoard are the ethnic initials ΣΕ.<sup>8</sup>

2006 (Collection BCD), nos. 154–353 (early fifth century down to the first century BC), nos. 354–373 (under the Romans), which includes also the full typological series of the coins of Sicyon and specimens of excellent quality. For the types on the Sicyonian staters, Chimaera and dove, see Lacroix (1964, 5–52).

4. Opinions resulting from recent research tend to agree on the chronology of these staters in their entirety. See *ACGC* 1976, pp. 99–100, 114; Warren (1983, 32); see also the extensive discussion in Warren (2000, 204–205, with n. 31), including comments on the earlier bibliography.

5. Although in *IGCH* 62 a burial date of c. 350 BC is given, the earlier date of 364 BC is now proposed, since the Theban staters included in the hoard seem to have been struck to finance the campaigns of Pelopidas and Epaminondas in the period of Theban hegemony down to 362 BC. See Hepworth (1986, 36; 1998, 65), Warren (2000, 204, with n. 22).

6. *ACGC* 1976, 100; see especially Warren (1983, 32; 2000, 204–205), Wartenberg (1997, 181, 188, nos. 90–91 [= *CH* VIII, 182 and IX, 86]).

7. Warren (2000, 206–210); especially on the copper, see Warren (1983, 23–56; 1984, 1–24; 1985, 45–66; 1998, 347–361).

8. The following types of the ethnic are otherwise recorded: Σικυώνιος (Meiggs and Lewis 1969, no. 27.3), Σικυώνιος (Hdt. 5.69.1; Tod 1968<sup>4</sup>, no. 120), Σεκυώνιος (*SGDI* 3162) and

The staters issued by Thebes<sup>9</sup> compose the majority of our hoard. Represented on the obverse and reverse are the Boeotian shield and a volute amphora, respectively. All come from different obverse and reverse dies. Their axes vary, and their state of preservation is in general very good, and in a few cases excellent (12, 14). Traces of a blue tone have been observed on the surfaces of some coins (6, 9, 12, 13). The representations on both obverses and reverses came from skillfully worked dies. A number of coins are not well centered either on the obverse and the reverse (7, 12) or only on the obverse (10). Small die breaks are visible mainly in the rim of the shield (see catalogue), and in one case, a shield has a small cut shaped like a crescent (7). The Theban staters, struck on the Aeginetan weight standard, are divided into two groups belonging to different chronological periods: those with the initials of the ethnic given as ΘΕ (5–7) and those bearing an abbreviated name denoting the individual responsible for minting that issue, without giving the ethnic (8–14). The device represented on the reverse of the staters that have the ethnic is in a shallow square incuse, whereas on those bearing the magistrates' names, the device is in a shallow incuse concave circle.

All the Boeotian coins, silver and bronze, were studied by Head (1974<sup>3</sup>, 9–99),<sup>10</sup> who divided them into sixteen periods. The minting activity of Thebes, from archaic to imperial times, was arranged by Head into eleven periods (I, II, IV, V, VI, VII, VIII, IX, XI, XV, XVI). Three of the Theban staters of our hoard belong to Period VI (5–7), dated by Head from 426 to 395 BC, a time during which the minting of coins in Boeotia was monopolized by Thebes. Phoungas dates them to around 430–414 BC (Phoungas 1986, 50–58), on the basis of the inscription and using stylistic and technical criteria as well, referring to the type of incuse square, which gradually became a concave incuse. Since the corpus has not yet been assembled, the evidence for a precise dating of these coins is limited. The incuse square of the reverse with slightly rounded corners, the inscription of the ethnic ΘΕ, and the absence or presence of a symbol suggests dates in the last quarter of the fifth century BC.

The remaining Theban staters of our hoard, which were issued for the Boeotian League during the fourth century BC and bear abbreviated magistrate names (8–14), belong to Head's Period IX (379–338 BC). The period coincides with the Theban hegemony in Greece and, for much of this time, the domination of the

ΣεῖυΦωνιος (graffito from Delphi: Jeffery 1990<sup>3</sup>, 140); Legon (2004, 468).

9. For the history of Thebes during the time of the Theban hegemony and in general the political connections of the Boeotian League, see Roberts (1974<sup>3</sup>, 15–27, 43–56), Roesch (1965), Buckler (1980), Buck (1994), Hansen (2004, 455).

10. See also *BMC* (Central Greece), pp. 32–93; *Traité* II.1, nos. 1309–1326 and II.3, nos. 205–270; *SNG Cop.* 241–396. For an outstanding collection of Theban coins from archaic to imperial times, see Triton IX, 10 January 2006 (Collection BCD), nos. 318–590.



leading personalities of Pelopidas and Epaminondas. With justification, Head ruled out the possibility that the names on these issues are those of Boeotarchs or of the annual eponymi of Thebes and suggested that they are likely to denote the initials of Polemarchs (Head 1974<sup>1</sup>, 61–62).<sup>11</sup>

Phoungas (1986, 71–83, 94, with n. 4) dates a number of magistrate staters, among which is ΨA-RO (11–12), to 404/03–395 BC, on the basis of style and the continued adherence to the local alphabet in the inscriptions, since the Attic alphabet was introduced in 395 BC. In an important article, Taillardat and Roesch (1966, 70–87) demonstrated the date the alphabet was changed. Yet Hepworth (1986, 38; 1998, 62) correctly notes that the abandonment of the Boeotian in favor of the Attic alphabet on the coin inscriptions did not suddenly occur in the year 395 BC, but that there was a transitional period during which both alphabets were in use. The staters with other names (8–10, 13–14) Phoungas (1986, 121–140) places in the period 371/70–338/35 BC, using as criteria the hoards and the identification of the names as personages of the area's political life, the Boeotarchs, an opinion that had been upheld also by Babelon and Koumanoudis (*Traité* II.3, col. 253–254; Koumanoudis 1964–1966, 69). He identifies the magistrate ΔΑΜΟ (8) as Damophilos, who was Boeotarch between 371 and 365 BC (Phoungas 1986, 137, with n. 24; Koumanoudis 1964–1966, 65, no. 5). For the name ΦΑΣΤ (9–10), he observes that while it was a very common name in Boeotia, he could well have been a Boeotarch (Phoungas 1986, 136, with n. 14–16; Koumanoudis 1964–1966, 64, no. 3). The name Ψ(X)ΑΡΟ, written in the local alphabet on the staters dated between 403 and 395 BC, he attributes to Charon, who fought in the battle of Koroneia in 353/52 BC (Phoungas 1986, 140, with n. 44; Koumanoudis 1964–1966, 69, no. 14). He asks if the name ΚΛΙΩ (13), might be identifiable as the ΚΛΙΩΝ who is recorded on other staters, without taking a final stand on the matter (Phoungas 1986, 139). For the interpretation of the initials ΑΣΩ (14), Phoungas discusses three historical figures, Asopichos, Asopodoros, and Asopoteleis. The first he excludes, as he was not a political figure. He suggests that either the second, who was Boeotarch in 363 BC, or the third, who was one of the seven Boeotarchs in 365 BC, could have been recorded on the coins. One solution he proposes is that the names of both the second and third could have been written on two different issues: on the earliest, the name Asopoteleis is abbreviated as ΑΣ / ΩΠ, and on the later issue Asopodoros is recorded as ΑΣ / Ω (Phoungas 1986, 136–137, with n. 17–22; Koumanoudis 1964–1966, 64, no. 4).

The final answer to the problem of a secure chronology and the identity of the magistrates whose names are recorded (8–14) is given by Hepworth (1998, 63).

11. For the various archons, including also the Polemarchs, see Roesch (1965, 155–180, 95–108), especially for the Boeotarchs.

The issues cover a span of fifty years from c. 395/90 to 335 BC at the latest, the year when the city of Thebes was completely destroyed by Alexander the Great. He recognizes forty-five different names on the staters and four more on the bronzes. He interprets them as the names of officials responsible for the striking of coins,<sup>12</sup> and he also observes that the symbols on some of the reverses are to be connected with local cults or with the recorded officials (Hepworth 1998, 62). On the basis of the die links, he has been able to date all these staters and to organize the issues into four groups (A–D) (Hepworth 1998, 63–66). The staters from our hoard belong to groups A (ΔΑΜΟ, ΦΑΣΤ), B (ΨΑΡΟ), C (ΚΛΙΩ), and D (ΑΣΩ). For the staters with the initials of the name ΚΛΙΩ (13), he has ascertained that they were struck by one obverse die, which is not shared with an earlier or a later magistrate, and that these are the latest coins to have entered the Myron hoard, unworn (Hepworth 1986, 36; 1998, 65). He recognizes ΦΑΣΤ as the historical figure Astias (9–10), who was one of the leaders of the two rival parties in Thebes during the first two decades of the fourth century BC; the other was Androkleidas.<sup>13</sup> Likewise, the initials Ψ(X)ΑΡΟ (11–12) he attributes to Charon, who was the leader of the successful nationalist insurrection in Thebes in 379 BC and politician during subsequent years (Hepworth 1986, 38; see also Phoungas 1986, 81).

On the reverses of five coins from the hoard there are graffiti.<sup>14</sup> Quite a number of high value coins are known to exist, from as early as archaic times, which bear as graffiti one or more initials or entire names that were incised by their owners (Manganaro 1983, 9–20).<sup>15</sup> In rare cases, the names of the dead were incised on coins of precious metal and accompanied them to their tomb.<sup>16</sup> Among the most

12. Kraay likewise suggests that the magistrates' names do not refer either to eponymi archons or to Boeotarchs, and they are not to be identified. See ACGC 1976, 113.

13. On (F)Astias, see Hepworth (1986, 38–39), Phoungas (1986, 136). For Androkleidas, see Hepworth (1986, 38–39; 1998, 63, table I, nos. 3–4 [ΑΝΔΡ]), Phoungas (1986, 90).

14. On the various meanings and purposes of graffiti, see Lenormant (1874–1877, 325–346), Manganaro (1983, 9–20); Melville Jones (1998<sup>1</sup>, s.v. *graffito*).

15. See also a number of other examples: on staters of Sicyon, Leu 96, 8 May 2006 (Collection BCD), nos. 197.5, 213; on Theban staters with the ethnic, SNG Cop. 285, 306 or with magistrates' names, SNG Cop. 324, 328, 335; Triton IX, 10 January 2006 (Collection BCD), nos. 397, 519, 568–569, 574; on coins of Alexander the Great and Philip Arrhidaeus, Price (1991, 71); on a new style Athenian tetradrachm, Thompson (1961, no. 385); on a specimen of Eleutherna, Le Rider (1966, 105, no. 5); on coins of Poseidonia, Leontinoi, and Elis, of Ptolemaios I, Oikonomidou (1996, nos. 23, 35, 86, 160); of Corinth, BMC (Corinth) 8. Graffiti on isolated coins bear the names of gods, to which they are dedicated; see, for example, a triobol of Phocis, J. Hirsch, 13, 15 May 1905 (Collection A. Rhousopoulos), no. 1640; Lenormant (1874–1877, 327–334). See also Manganaro (1983, 11–15), where the material known to his time is collected.

16. On two gold coins of Philip II, found in two graves in the south cemetery of Pydna, see Besios (1992, 247). See also Tzifopoulos (forthcoming, 32–33, 69, nos. 13, 14), where

interesting cases are the graffiti on a few coins, on which long dedications were incised and the coins then offered to a divinity.<sup>17</sup> Coins with the initials of names as graffiti are likewise found in hoards, the names being unrelated to one another and having no necessary relation to the owner of the hoard.<sup>18</sup>

The graffiti on the reverse surfaces of the five coins constitute three initials of names and two whole words, while visible on a few are some scratched lines that do not signify letters. Since the inscriptions added were short, their writers did not consider it worthwhile to smooth the surfaces of the coins, as seen in other situations.<sup>19</sup> Written on one of the Sicyonian staters as a graffiti is the word  $\Lambda\epsilon\iota\alpha$  (Pl. 60, 4); one of the Theban staters has the word  $\text{NI-KA}$  (Pl. 60, 5); easily read on three Theban staters are graffiti with the letter (initial of a name)  $\Lambda$  (Pl. 60, 8), with the initials of the name  $\text{ONA-}\Sigma\text{IM}$  (Pl. 60, 9) and with the letter (initial of a name)  $\text{N}$  (Pl. 60, 13) respectively. The letters were incised with a pointed metal tool: some are clumsily written and others are neither in line nor spaced evenly letter to letter, as if written with an unsteady hand.<sup>20</sup>

In the incising of  $\Lambda\epsilon\iota\alpha$  the  $\epsilon$  is rendered with the vertical leg lengthwise and the horizontal legs oblique in the archaic style (Jeffery 1990<sup>3</sup>, 66–67 and table). The coin's owner, who incised the word  $\text{NIKA}$ , could not be called skilled, since to write the first two letters  $\text{NI}$  he made several incisions in an effort to achieve the result he wanted. The  $\text{N}$ , probably through lack of skill, he rendered retrograde. It is otherwise with the last two letters,  $\text{KA}$ , either because his hand was steadier or because he used a sharper tool. To incise the letter  $\text{K}$ , he made a trial incision, as can be seen from the clearly visible vertical line, which he then abandoned, finally rendering the letter correctly. On the other stater, the initial letter  $\Lambda$  is rendered in the archaic style with the central hasta oblique, just as in the graffiti with the word  $\Lambda\epsilon\iota\alpha$ . On the stater bearing the initials of the name  $\text{ONA-}\Sigma\text{IM}$ , the right vertical of the letter  $\text{M}$  was lengthened through clumsiness. The *sigma* is rendered in archaic form. Finally, the central hasta and the right vertical of the  $\text{N}$  on the other

he makes the observation that burial coins conform to the gold lamella practices. I express here my thanks to Prof. Tzifopoulos, who was kind enough to allow me access to his book.

17. *BMC* (Peloponnesus) 65 and *Traité* II.3, no. 776 (Sicyon); for his final interpretation, see Manganaro (1983, 15), Ashton (1987, 1–7 [Aegina]).

18. For example, on a Theban magistrate stater from the Tricca hoard 1938 (*IGCH* 117: for this information I thank Mr. I. Stoyas); on Aeginetan and Theban magistrate staters from the Myron hoard 1914 (*IGCH* 62; Svoronos 1916, nos. 681, 692, 1316, 1338, 1498).

19. See Ashton (1987, 2), Besios (1992, 247), Tzifopoulos (forthcoming, 32–33, nos. 13–14).

20. The same phenomena are observable also in the graffiti on ostraka. See, for example, the graffiti from the Agora (Lang 1990, 9–10). See also the observations of Ashton (1987, 2) on coins with graffiti.

stater cross each other at the bottom; the right vertical leg is lengthened toward the top and ends in a curve. The differences observable in the rendering of the letters suggest that they were written by different hands. One writer was probably responsible for the two graffiti AEIA and A, because of the similar rendering of the A. Another writer incised the graffiti NIKA, and yet another carved the graffiti ONAΣIM and N, to judge from the similarity in the rendering of the N. The fact that the graffiti were not incised by expert writers but were written by whoever happened to possess the coin, means that the Attic alphabet of the classical period was in use (Jeffery 1990<sup>3</sup>, 66–67 and table; Guarducci 1987, 81–84), but together with the archaic letter forms of, E, A, and Σ on three of the staters. This is not surprising, since the phenomenon is evident also in the inscriptions; for example, on the official Theban magistrate staters, the letters of the Boeotian alphabet continue in use during the fourth century BC to around the 360s BC, despite the introduction of the Attic alphabet by 395 BC. To be sure, those who incised their names on the coins were not necessarily either Thebans or Sicyonians, but they were, as we shall see, the final possessors of the coins, however they may have acquired them.

Apart from the letters A and N, which are written on two staters and shed no further light on what the names might be, the initials of the name ONAΣIM lead us to a series of names known from the written sources,<sup>21</sup> which nevertheless cannot be identified as the name on the coin. The initials ONAΣ and ONAΣI (the *sigma* not rendered in archaic form) correspond to Theban issues (379–368 BC) with a similar magistrate inscription;<sup>22</sup> the initials have not been identified with any particular historical person and, as rightly observed by Phoungas (1986, 139), the initials are those of a name very common in Boeotia. Thus it is equally possible that ONAΣIM was a local Theban or that he was a foreigner.

21. The names are Onasimos, Onasimbrotos, Onasimachos, Onasimides, Onasimas, and Onasimenes. Onasimos is the most common name and is found in the Cyclades, Crete, Cyprus, Peloponnese, Dalmatia, Epiros, southern Italy, Sicily, Macedonia, and in Boeotia, where the names Onasimbrotos and Onasimidas are also recorded, see *LGNP* I 1987, s.v. *Onasimos*; *LGNP* III A 1997, s.v. *Onasimos*; *LGNP* III B 2000, s.v. *Onasimos*, *Onasimbrotos*, *Onasimidas*; *LGNP* IV 2005, s.v. *Onasimos*; Imhoof-Blumer (1877, 11, no. 31); Roesch (1965, 88, 147, 167, 171); Koumanoudis (1979, nos. 1539–1546). Likewise with the name Onasimos, two Macedonians are known outside Macedonia. See Tataki (1998, 157, 392). Onasimachos corresponds to a name in Calymna; see *LGNP* I 1987, s.v. *Onasimachos*. Onasimides corresponds to a name in Arcadia; see *LGNP* III A 1997, s.v. *Onasimides*. The same name is recorded as belonging to a historical figure from Thebes, a sculptor who made a statue of Dionysos (Lippold 1939, col. 406, s.v. *Onasimedes*). Finally, Onasimas and Onasimenes are recorded in Cyprus; see *LGNP* I 1987, s.v. *Onasimas* and *Onasimenes*.

22. Staters: Head (1974<sup>2</sup>, 66); Phoungas (1986, 133, no. 159); Hepworth (1998, 64, Group C, pl. 3, table XII, no. 79); Triton IX, 10 January 2006 (Collection BCD), no. 520. Bronzes: Imhoof-Blumer (1877, 11, no. 31); *BMC* (Central Greece) 190–192.

The words ΛΕΙΑ and ΝΙΚΑ (Doric version, instead of ΝΙΚΗ) appear on two other staters, one Sicyonian and one Theban, respectively. The word ΛΕΙΑ cannot be interpreted as a name, since no corresponding initials of such a name have been found.<sup>23</sup> While names with the initials ΝΙΚΑ are widely known in Greek prosopography,<sup>24</sup> it does not seem to have been the intention of the inscriber to record a name. Unlike the initials of names mentioned above, these are complete words: the first in the exergue of the coin and the second spread *r.* and *l.* of the ethnic on the reverse. The word ΝΙΚΑ must therefore be interpreted as victory (goddess of victory) and the word ΛΕΙΑ as spoils.

The word ΝΙΚΑ (victory) appears as a legend on coins, especially those of southern Italy and Sicily, Corcyra, Mytilene, Mallos, and Pionia, and as ΝΙΚΗ on coins of Antioch/Syria and Alexandria/Egypt (Leschhorn and Franke 2002, s.v. *νίκη*). The word is not known to me as a graffito on coins, except on the present example. The word ΛΕΙΑ (Buck 1949, s.v. *λεία* [Ion. *ληϊή*, Dor. *λάια*, Hom. *ληϊς*; Liddell and Scott, s.v. *λεία*) comes down from the ancient sources, from the Homeric texts on, with the meaning of spoils (Pritchett 1971, 54–57). Apart from the present coin, the word as a graffito is known to me in one other case as well: a silver coin of Scione (c. 480–470 BC), in the exergue of which are the first three letters ΛΕΙ.<sup>25</sup> The circumstances of discovery of this unique coin, however, are not known, so no further discussion is possible.

In many cases, as is evident from the literary sources, one tenth (1/10), the *δεκάτη* of the spoils (Pritchett 1971, 93–100) acquired after a victory, in accordance with Greek custom, was dedicated by the victors in a sanctuary. This might take the form of part of the booty itself, or this could be sold and the money received by the victors used as an offering. It is likely that some of the many dedicatory coins recorded in the temple inventories comprised the *δεκάτη* from spoils (Pritchett 1971, 96). Of the numismatic material known with various graffiti, some coins most certainly represented the *δεκάτη*, even without the mention of the word *λεία*, but using other words instead. Thus, on an Aeginetan stater with a graffito inscription of thirty-two letters on its smoothed surface, the word *λύτρα* is recorded. As Ashton (1987, 3–6) rightly saw with his correct interpretation of the inscription

23. See, for example, LGPN IV 2005, s.v. *Leiloos*, *Leimanos*, *Leimeie*, *Leimon*, *Leichias*.

24. LGPN I 1987, pp. 327–332; LGPN II 1994, pp. 330–331; LGPN III A 1997, pp. 315–319; LGPN III B 2000, pp. 298–302; LGPN IV 2005, pp. 249–251; Koumanoudis (1979, nos. 1408–1415). Macedonian names with the initials Nica are known from Beroea, Nicadas, Nicandros, and Nicanor during the third–first centuries BC (Tataki 1988, 235–236). There are also quite a number of Macedonians with the initials Nica, whose names are found outside Macedonia from the fifth–second centuries BC (Tataki 1998, s.v. *Nicagoras*, *Nicadas*, *Nicaia*, *Nicaios*, *Nicandros*, *Nicanor*, *Nicarchides*, *Nicarchos*).

25. Elsen 49, 19 April 1997, no. 223.

and the meaning of the word *λύτρα*, the owners of the coin “after a successful ransoming of captives taken in war, resolved to dedicate a *δεκάτη* of the spoils to the deity known locally as Matrovia.” They wrote the dedication on one of the staters they dedicated to the deity, together with the deity’s name. The coins of our hoard were dedicated in a different way. The words *λεία* and *νίκα(η)* were written as graffiti on two staters rather than on one, showing their desire to make the dedication, and including the names of the dedicators. However, the name of the deity who received the dedication is missing. As noted above, there is no certainty that the entire hoard has been recorded; thus it is possible that the name of the deity was written on some other stater.

The composition of the hoard with high value coins, nearly all in an excellent state of preservation, could, first of all, suggest its interpretation as a savings hoard, hidden during a time of emergency. The coins, chosen by their owner with care, consist of issues representing production through a span of some ninety years. The coexistence of the earliest Sicyonian and Theban staters in the hoard is no surprise. With the end of the political life of Aegina and the closing of its mint, its place was assumed by Sicyon, whose coinage saw wide circulation at the end of the fifth and beginning of the early fourth century BC. The coins of Sicyon, in their turn, were gradually replaced by the staters of Thebes during the period of Theban hegemony (ACGC 1976, 114).<sup>26</sup> This situation may well be reflected also in our hoard. If this is so, the graffiti will probably already have been incised on the coins, since the owner would have had no reason to damage the surfaces of such beautiful creations. Yet the words *λεία* and *νίκα(η)* prevent us from characterizing the hoard as savings that were buried for security by their owner at a time of great danger. The graffiti appear to compose a “narrative,” since the initials Onasim, A, and N on the three staters are the names of people, and the words “spoils” and “victory,” respectively, carry a special weight. This interpretation leads us to suppose that this is actually a dedicatory group of coins that, as the product of spoils in the aftermath of a victory, was dedicated by the victors, evidently as a *δεκάτη* to some deity and sanctuary. As a working hypothesis, we do not exclude the possibility that our hoard represents either part of a mass of coins that came as loot into the hands of the victors<sup>27</sup> or part of the money acquired by the victors from the sale of the spoils. In both cases, the outcome is the same, since on some of the coins the new owners incised their names and the words that unite them, both with the victory and with their spoils, in order to dedicate them to a divinity. The staters are likely to have been placed in a bronze vessel (causing the oxidation of the reverse of coin

26. We may note that during the period of the Theban hegemony, Sicyon had from time to time close connections with Boeotia (Skalet 1975, 86–91; Lolos 1998, 56–59).

27. Sometimes the victors did not sell their spoils (Pritchett 1971, 98).

3), which was dedicated in a sanctuary and then discovered in our time, in the end to be termed by us a hoard. Unfortunately, the scanty information we have about the circumstances of discovery of this numismatic ensemble, the only certainty being that it was found in Boeotia, near a sanctuary (without further elucidation), does not allow us any precise hypotheses about the dedication.

We have two facts which may help in dating the hoard and connecting it with historical events: the certainty that it was found in Boeotia and the date of the latest coins that entered the hoard, c. 360s/350s BC for the Sicyonian and 338 BC for the Theban stater with the magistrate's name ΑΣΩ. On this latter issue, Hepworth (1998, 66) observes that it must have been the final issue of group D, so its date approaches the lowest limit. Both the Sicyonian and the Theban staters, while in a very good state of preservation, have small traces of wear from circulation. Even if the Theban issue was produced a few years before 338 BC, assuming a certain, if brief, circulation, the coins cannot have been gathered much after this date.

If we accept the hypothesis that this is a dedicatory numismatic aggregate, we must search for the dedicators. If they were Thebans, the circumstances of such a dedication derived from military spoils might seem to be connected with the great successes of the Boeotian army in both southern and mainland Greece down to the middle of the fourth century BC. Yet this is impossible, because the latest coin of our hoard is too late in date. The end of the Third Sacred War in 346 BC, the results of which were deadly for the Phocians (Hammond and Griffith 1979, 346–347, 453–454; Buckler 1989, 140–142) was an important event for Thebes. Philip II, with careful planning, left the fate of the Phocians to the Amphictyons, chiefly the Thessalians and the Thebans. The terms imposed on the Phocians were severe: the Phocian Confederacy was dissolved, their cities destroyed, and their population scattered in unwalled villages and burdened with a fine of sixty talents per year for a duration of 167 years. The Thebans played a decisive part in the catastrophe of the Phocians. We might consider the possibility that after that exceedingly important event these coins were dedicated by some Thebans in a local sanctuary. Yet the last Theban issue in the group would then have been in circulation for a some time before 346 BC, which is difficult to reconcile with the likely date of 338 as the terminal year for striking the coin (14).

The numismatic assemblage can be connected more easily with other developments in the region of Boeotia. Both the period of the dramatic events during the battle of Chaeronea in 338 BC, which signaled the collapse of the Theban hegemony in mainland Greece and the establishment of a Macedonian guard in the Cadmea, and the destruction of Thebes in 335 BC by Alexander the Great after the unsuccessful revolt against him might be considered as possible circumstances for the dedication and hiding of the hoard. The dedicators in these cases would not have been Thebans, but rather Macedonian victors, after the events of

338 or 335 BC. The only name preserved to any extent, Onasim, could well be Macedonian.<sup>28</sup> While it might be expected that the enemy would have made such a dedication on his return to his homeland, he could well have made it in an important local sanctuary.<sup>29</sup>

The leading position of Thebes in the events of mainland Greece and its dynamic intervention in the Peloponnese, with the intention of reducing the Spartan hegemony, together with the known political relations between Sicyon and Thebes that followed, are thrown into relief by the numismatic circulation and coexistence of their coins during the period that concerns us (the end of the fifth down to the end of the fourth century BC), in Boeotia, mainland Greece and Thessaly, and in the Peloponnese.<sup>30</sup> The Sicyonian staters appear throughout the entire span of the fourth century BC in the hoards of mainland Greece and Thessaly, together with Theban and other issues, in gradually lessening numbers and with the gradual introduction of their fractions into the hoards. The Theban staters, to be sure, occur in greater numbers, particularly with the dynamic introduction of those bearing the magistrates' names. The frequent hiding with comparable content of hoards during the fourth century BC in the above region reflects the importance of Thebes, but it reflects as well the repeated military clashes of that tumultuous time. Despite the uncertainty as to whether they represent the entire aggregate or only a part of the find, the composition of the new find from Boeotia, consisting of Sicyonian and Theban staters, yields a number of conclusions. Based on the date of the latest staters, of Sicyon in the middle of the fourth century BC and of Thebes around 338 BC at the latest, the gathering of these coins appears to have come to an end either directly after the battle of Chaeronea or during the tragic repression by Alexander the Great of the Theban rebellion. The graffiti on five of the coins, and particularly the words *λεία* and *νίκα(η)* recorded on two of these, we have ventured to connect directly with the find: these words, which were on the coins before their ultimate assembly, were not employed by chance. All indications are that the graffiti were written on them after one of the important military events mentioned above, probably by victorious Macedonians, with the intention of dedicating them in some local sanctuary.

28. See note 21, above.

29. After important victories, it was usual to make dedications in the great Greek sanctuaries. See, for example, Hdt. (9.81), Pritchett (1971, 95).

30. The find, comprising staters of Sicyon and Thebes, agrees with a considerable number of comparable hoards from Boeotia, mainland Greece, and Thessaly from the end of the fifth to the end of the fourth century BC. See *IGCH* 42, 58, 59, 62, 93, 111; *CH* I, 17, 33; *CH* II, 42, 52; *CH* III, 43; *CH* IV, 20; *CH* VI, 24; *CH* VII, 43, 51. Coins of Sicyon, staters and fractions, without Theban coins, are found in the same regions. See *IGCH* 70, 81, 97, 117. The coexistence of Sicyonian and Theban staters or fractions is notable also in hoards of the Peloponnese during the same period. See *IGCH* 40, 48, 67, 68, 76, 102, 105, 108, 122.



## ACKNOWLEDGEMENTS

Valuable assistance in carrying out our work, with fruitful discussions, was provided by Dimitrios Artemis. I thank him warmly. Thanks are due likewise to Ilias Iliadis for the photographs of the coins with all their details, and to the archaeologist Dimitrios Kalpakis for composing the plates.

## REFERENCES

- ACGC = Kraay, C. M. 1976. *Archaic and classical Greek coins*. London.
- Ashton, N. G. 1987. What does the turtle say? *Numismatic Chronicle* 147: 1–7.
- Balla, F. 2003. *Η Κορινθία. Από την πτώση των Μυκηναϊκών βασιλείων ως το πέρας της διακυβέρνησης των Κυψελιδών*. Rhethymno.
- Besios, M. 1992. Excavation in northern Pieria, 1992. *Archaeological Work in Macedonia and Thrace* 6: 245–248.
- BMC (Central Greece) = Head, B. V. 1884. *A catalogue of the Greek coins in the British Museum. Central Greece*. London.
- BMC (Peloponnesus) = Gardner, P. 1887. *A catalogue of the Greek coins in the British Museum. Peloponnesus*. London.
- BMC (Corinth) = Head, B. V. 1889. *A catalogue of the Greek coins in the British Museum. Corinth, colonies of Corinth, etc.* London.
- Buck, C. D. 1949. *Dictionary of selected synonyms*. Chicago.
- Buck, R. J. 1994. *Boiotia and the Boiotian league, 423–371 BC*. Alberta.
- Buckler, J. 1980. *The Theban hegemony, 371–362 BC*. Cambridge.
- . 1989. *Philip II and the sacred war*. Supplement to *Mnemosyne* 109. Leiden.
- CH I, II, III, IV, VI, VII, VIII, IX = *Coin Hoards* I (ed. M. J. Price, London 1975); II (M. J. Price, ed., London 1976); III (M. J. Price, ed., London 1977); IV (M. J. Price, ed., London 1978); VI (M. J. Price, ed., London 1981); VII (M. J. Price, ed., London 1985); VIII (U. Wartenberg, M. J. Price, and K. A. McGregor, eds., London 1994); IX (A. Meadows and U. Wartenberg, eds., London 2002).
- Guarducci, M. 1987. *Epigrafia greca dalle origini al tardo impero*. Rome.
- Hammond, N. G. L., and G. T. Griffith. 1979. *A history of Macedonia, 550–336 BC*. Oxford.
- Hansen, M. H. 2004. Boiotia. In *An inventory of archaic and classical poleis*. Hansen, M. H. and T. H. Nielsen, eds., 454–457. Oxford.
- Head, B. 1974<sup>2</sup> [1881]. On the chronological sequence of the coins of Boeotia. *Numismatic Chronicle* 1: 177–275.
- Hepworth, R. G. 1986. Epaminondas' coinage. In *Proceedings of the Tenth International Congress of Numismatics*, I. A. Carradice et al., eds., 35–40. London.
- . 1998. The fourth century BC magistrate coinage of the Boiotian confederacy. *Nomismatika Khronika* 17: 61–96.

- IGCH = Thompson, M., et al., eds. 1973. *An inventory of Greek coin hoards*. New York.
- Imhoof-Blumer, F. 1877. Zur Münzkunde Boeotiens und des peloponnesischen Argos. *Numismatische Zeitschrift* 9: 1–62.
- Jeffery, L. H. 1990<sup>3</sup>. *The local scripts of archaic Greece*. Oxford.
- Koumanoudis, S. N. 1964–1966. Προσωπογραφικά θηβαϊκών νομισμάτων. *Νέον Αθήναιον* 5: 62–69.
- [Koumanoudis, S. N.] 1979. *Θηβαϊκή προσωπογραφία*. Athens.
- Lacroix, L. 1964. Quelques aspects de la numismatique sicyonienne. *Revue Belge de Numismatique* 110: 5–52.
- Lang, M. L. 1990. *Ostraka. The Athenian agora XXV*. Princeton.
- Lagon, R. P. 2004. Megaris, Corinthia and Sikyonia. In *An inventory of archaic and classical poleis*, M. H. Hansen and T. H. Nielsen, eds., 468–471. Oxford.
- Lenormant, F. 1874–1877. Les graffiti monétaires de l'antiquité. *Revue Numismatique*: 325–346.
- Le Rider, G. 1966. *Monnaies crétoises du Ve au Ier siècle av. J.-C.* Paris.
- Leschhorn, W. and P. R. Franke. 2002. *Lexikon der Aufschriften auf griechischen Münzen*. Wien.
- LGPN I = Fraser, P. M., and E. Matthews, eds. 1987. *A lexicon of Greek personal names*. Vol. 1, *The Aegean islands, Cyprus, Cyrenaica*. Oxford.
- LGPN II = Osborne, M. J., and S. G. Byrne, eds. 1994. *A lexicon of Greek personal names*. Vol. 2, *Attica*. Oxford.
- LGPN IIIA = Fraser, P. M., and E. Matthews, eds. 1997. *A lexicon of Greek personal names*. Vol. 3a, *The Peloponnese, western Greece, Sicily, and Magna Graecia*. Oxford.
- LGPN IIIB = Fraser, P. M., and E. Matthews, eds. 2000. *A lexicon of Greek personal names*. Vol. 3b, *Central Greece, from the Megarid to Thessaly*. Oxford.
- LGPN IV = Fraser, P. M., and E. Matthews, eds. 2005. *A lexicon of Greek personal names*. Vol. 4, *Macedonia, Thrace, northern regions of the Black Sea*. Oxford.
- Liddell, H. G., and R. Scott. 1940<sup>9</sup>. *A Greek-English lexicon*. New ed. by H. S. Jones and R. McKenzie. Oxford.
- Lippold, G. 1939. *Real-Encyclopädie XVIII*<sup>1</sup>, col. 406, s.v. *Onasimedes*.
- Lolos, G. J. 1998. *Studies in the topography of Sikyonia*. Ph.D. diss., Berkeley.
- Manganaro, G. 1983. Graffiti monetali e onomastica Greca. *Jahrbuch für Numismatik und Geldgeschichte* 33: 9–20.
- Meiggs, R., and D. Lewis. 1969. *A selection of Greek historical inscriptions to the end of the fifth century BC*. Oxford.
- Melville Jones, J. 1998<sup>2</sup>. *A dictionary of ancient Greek coins*. London.
- Oikonomidou, M. 1996. *Αρχαία νομίσματα* (ΕΛΛΗΝΙΚΗ ΤΕΧΝΗ). Athens.

- Phoungas, A. 1986. *Catalogue des statères béotiens au type de l' "amphore," Ve-IVe siècle av. J.-C.* Diss., Lyon.
- Price, M. J. 1991. *The coinage in the name of Alexander the Great and Philip Arrhidaeus.* Zurich-London.
- Pritchett, W. K. 1971. *Ancient Greek military practices.* Berkeley.
- Roberts, W. R. 1974<sup>2</sup> [1895]. *The ancient Boeotians: their character and culture and their reputation.* Chicago.
- Roesch, P. 1965. *Thespies et la Confédération Béotienne.* Paris.
- SGDI = Collitz, H., and F. Bechtel, eds. 1884-1915. *Sammlung der griechischen Dialekt-Inschriften.* Göttingen.
- Skalet, C. H. 1975 [1928]. *Ancient Sicyon: With a prosopographia Sicyonia.* Athens.
- SNG Cop. = *Sylloge Nummorum Graecorum. Danish National Museum. Phliasia-Laconia.* Copenhagen, 1944.
- Taillardat-Roesch = Taillardat, J., and P. Roesch. 1966. L' inventaire sacré de Thespies. L' alphabet attique en Béotie. *RPhil* 40: 70-87.
- Tataki, A. 1988. *Ancient Beroea. Prosopography and society.* MELETEMATA 8. Athens.
- . 1998. *Macedonians abroad. A contribution to the prosopography of ancient Macedonia.* MELETEMATA 26. Athens.
- Thompson, M. 1961. *The new style silver coinage of Athens.* New York.
- Tod, M. N. 1968<sup>4</sup>. *A selection of Greek historical inscriptions. From 403 to 323 BC.* Oxford.
- Traité II.1 = Babelon, E. 1907. *Traité des monnaies grecques et romaines. Description historique II.1.* Paris.
- Traité II.3 = Babelon, E. 1914. *Traité des monnaies grecques et romaines. Description historique II.3.* Paris.
- Tzifopoulos, Y. Forthcoming. *Paradise earned. The Bacchic-Orphic gold lamellae of Crete.*
- Warren, J. A. W. 1983. The autonomous bronze coinage of Sicyon. Part 1. *Numismatic Chronicle* 143: 23-56.
- . 1984. The autonomous bronze coinage of Sicyon. Part 2. *Numismatic Chronicle* 144:1-24.
- . 1985. The autonomous bronze coinage of Sicyon. Part 3. *Numismatic Chronicle* 145: 45-66.
- . 1998. Updating (and downdating) the autonomous bronze coinage of Sicyon. In *Studies in Greek numismatics in memory of Martin Jessop Price*, R. Ashton and S. Hurter, eds., 347-361. London.
- . 2000. The silver coins of Sicyon in Leiden. In *Pour Denyse, Divertissements Numismatiques*, S. Mani Hurter and C. Arnold-Biucchi, eds., 201-210. Bern.
- Wartenberg, U. 1997. The Alexander-eagle hoard: Thessaly 1992. *Numismatic Chronicle* 157: 179-188.

## Panegyris Coinages

PLATES 62–64

SELENE PSOMA\*

This article presents a survey of *Panegyris* coinages and their function from those of Classical Delphi and Elis to the Hellenistic issues of Asia Minor.

In addition to coinages issued in the name of states, *poleis*, *ethnè*, federations, kings, military figures, and local dynasts, in the Greek world, we find also coinages issued in the name of gods, bearing the name of a deity in the genitive, but without an *ethnikon* or other indication of an issuing authority. While there is no doubt that coinages struck by military leaders were used to pay soldiers' wages (*siteresion* and *misthos*) and that currency issued by local dynasts normally served the same purpose, both the issuing authorities and the purposes for which coinages in the name of gods were issued remained unclear.<sup>1</sup> H. von Fritze (1910, 5–6) regarded them as coins associated with religious celebrations (*Festmünzen*), while L. Robert (1966, 46) referred to them as *monnaies de panégyries* and discussed the most important examples at length. R. Bogaert (1968, 295–297, n. 79) briefly but brilliantly explained the fiscal function of these coinages, which have also received commen-

\*Selene Psoma, Research Center for Greek and Roman Antiquity, The National Hellenic Research Foundation, 48 Vassileos Konstantinou Ave., 11635 Athens, Greece. E-mail: [spsoma@eie.gr](mailto:spsoma@eie.gr), [spsoma@atenet.gr](mailto:spsoma@atenet.gr).

1. The subject was partially treated in Psoma (2007b). The author wishes to thank R. van Bremen, F. de Callataj, F. Lefèvre, K. Panagopoulou, J. Roy, P. Thonemann, N. Kyriakides, and the anonymous reviewers for reading and commenting on earlier versions of that paper. Responsibility for mistakes remains strictly my own. On coinages linked to military payments, see Picard (1992), 133–139, Liampi (2000), 220–225, Psoma (2008), 246–249.

taries by Ph. Gauthier (1975, 170–172), G. Le Rider (1973, 76), P. Debord (1982, 230–235), and O. Mørkholm (1991, 29–30). This paper is an attempt to present an almost complete list of the silver and bronze coinages issued in the name of a god in pre-Roman times. By gathering all the related numismatic, epigraphic, and literary evidence, I hope to underline the connection of these coins with religious festivals, to discuss the reasons they emerged and the goals they served, and to note their short duration.

The coinages noted above should not be confused with a number of coinages with the name of a god in the genitive, referring to the most important civic cult, and the *ethnikon*.<sup>2</sup> These were struck on the Attic standard and bear legends of the type Ἡρακλέους Σωτήρος Θασίων. They were issued by the Cycladic island of Syros, Thasos and Maroneia in Thrace, Odessus further north, Parium and Alexandria Troas in Mysia, and Clazomenae in Ionia (Pl. 62, 1).<sup>3</sup> These were all civic issues and date from the Late Hellenistic period. Confusion should also be avoided with Greek coinages with the name of the god in the nominative or genitive accompanying the head or statue of the same god (Liampi 2002, 211, n. 23).

To return to the festival coinages: the date, metal, and issuing authority serve to form distinct groups. The earlier festival coinages dating from the Classical period are examined first. They are followed by the bronze coinages of Hellenistic date. The restricted number of silver coinages on the Attic standard emanating from western Asia Minor is discussed afterward. Another group of silver coinages that are associated with fairs of Classical date and were issued by Elis and Delphi, cities that controlled important sanctuaries and fairs, is followed by the Amphictionic coinage that emanated from the most important religious association of the ancient world; these are also explained as a coinage intended to serve the *panegyris*. Finally, there is a brief presentation of two bronze coinages dating from the late second century BC and issued by the Boeotian cities of Thespiiai and Orchomenos. The vast number of festival bronze coinages minted by Greek cities under the Empire cannot be examined in this paper (on these, see Harl 1987). Although these coinages are civic issues, they show that the tradition of minting for festival occasions continued long beyond the Hellenistic period.

2. See also Robert (1966), 44.

3. For Syros: Nicolet-Pierre and Amandry (1992), 295–306. For Thasos: Prokopov (2006), 16, 53. For Maroneia: de Callataÿ (1997), 113. For Parium: Meadows (1998), 41–46; for later dates proposed for this coinage, de Callataÿ (*per epistulam*). For Alexandria Troas: de Callataÿ (1997), 155–159, 177, 290, 334–335, 380, 383, 415, 418; 1986, 5–30, pl. 1–5. The initials Κλαζο(μενίων) of the *ethnikon* under the exergual line on the second known specimen bearing the legend Διδος Σωτήρος Ἐπιφανοῦς (Pl. 62, 1) from Tartous, Syria, 1987 hoard (CH VIII 471) buried c. 120 BC, identified the issuing authority of that tetradrachm; see also Seyrig (1971), 24–25, Le Rider (1973), 76, 78; (2001b), 42. Cf. de Callataÿ (1997), 84.

### EARLIER FESTIVAL COINAGES: ATHENIAN BRONZES WITH THE LEGEND ΕΛΕΥΣΙ

The first example may be provided by the bronze coinage with the legend ΕΛΕΥΣΙ (Pl. 62, 2). Its types refer to the Greater Mysteries, the Eleusinia: Triptolemos and “ritual *paraphernalia*, such as the initiates’ sacrificial piglet and their distinctive staff of bound myrtle boughs” (Kroll 1993, 28). Later, a head of Demeter occupied the obverse, while a *plemochoe*, the Eleusinian offering vessel, after which the last day of the Mysteries, *Plemochoai*, was named, and the “Eleusis ring” were depicted on the reverse (Kroll 1992, 355–356; 1993, 27–36, esp. 28–29). This coinage has given rise to much discussion (Kroll 1993, 27–28). It was struck at the Athenian mint and was issued by the city of Athens: from the mid-third century onward, the legend ΕΛΕΥΣΙ vanished, and coinage with Eleusinian types was sporadically issued with the legend ΑΘΕ. This bronze coinage was first recognized as a festival coinage by M. Thompson, who related it to the agonistic festival at Eleusis (Thompson 1942, 213–229). J. H. Kroll adopted the interpretation of a festival coinage but, on the evidence of its types, which refer exclusively to the Greater Mysteries, he proposed to associate it with the *Megala Eleusinia*. These were celebrated annually and attracted a greater number of visitors.

As J. H. Kroll explained, this coinage was minted to provide small currency for the festival trade.<sup>4</sup> “Each year every new initiate and his or her sponsor lived at Eleusis during the last four days of the festival, purchasing their lodging, food, drink, and amenities from local vendors, innkeepers . . . a whole agora of Athenian and itinerant merchants making the festival rounds.” Small cash for everyday use was required by such festival business, and the Eleusinian coinage came to replace tiny Athenian silver fractions.

The Eleusinian coinage began “sometime in the 350s.” It must be contemporary with “the revised code of regulations governing the publicizing and conduct of the Mysteries that was promulgated to encourage increased foreign participation.” The decision of Athens to adopt a bronze coinage for use at Eleusis during the festival was part of the city’s contemporary policy to encourage foreign participation and thus address the Mysteries to the πολυανθρωπότατα Ἑλλήνων (Phil. VA 4.17).<sup>5</sup>

4. Kroll (1993, 27–30), based on epigraphic evidence: IG II<sup>2</sup> 1304 of the years following 211/210 BC. See also Clinton 2005: no. 295 (IG II<sup>2</sup> 3500=3501: *Asklepieia*) of 35/30 BC, no. 478 (IG II<sup>2</sup> 3614: *Asklepieia* and *Panathenaia*) of AD 160–170, no. 479 (IG II<sup>2</sup> 3615) of 160–AD 170, no. 483 (IG II<sup>2</sup> 3592) post AD 162.

5. Kroll (1993), 28; Clinton (1980), 273–275, 281 = Clinton (2005), no. 138, pp. 122–130.

## COINAGES IN THE NAME OF GODS

## Bronze Coinages of Hellenistic Date

*Athena Alea (Tegea)*

With this interpretation and policy in mind, we may turn to another bronze festival currency from mainland Greece that dates most probably from the Hellenistic period: the rare bronzes issued in the name of Athena Alea (Ἀθανᾶς Ἀλέας; Pl. 62, 3) (Head 1911, 455; Le Rider 1973, 76). The cult of Alea, to which that of Athena was then added (Alea Athena and later Athena Alea), was the most important by far at the Arcadian city of Tegea (Jost 1985, 142–146, 369, 378–381). A local festival (*tripanagorsis*) is mentioned in a decree with which the city of Tegea promulgated regulations concerning “un terrain de pacage” in the area named Alea around 390 BC.<sup>6</sup>

*Zeus Eleutherios at Syracuse and Macedonia*

The introduction of the cult of Zeus Eleutherios was in many cases associated with freedom regained after long periods of tyrannies and similar situations.<sup>7</sup> Zeus Eleutherios was worshipped at Syracuse long before Syracuse issued the bronze coins with the legend Διὸς Ἐλευθερίου. After the death of Agathocles (289 and 287 BC), the city struck bronzes that shared types (head of Artemis Soteira on the obverse and a thunderbolt on the reverse) with bronzes issued in the name of Zeus Eleutherios (Διὸς Ἐλευθερίου; Pl. 62, 4).<sup>8</sup>

A single bronze coin with the legend Διὸς Ἐλευθερίου was part of a recently published hoard found at Serres, East Macedonia. The cult of Zeus Eleutherios was introduced in Macedonia after 167 BC and was, in some cases, preserved under the Empire (Liampi 2002, 203–220, n. 40).<sup>9</sup> The cities, such as Kalindoia, and probably the districts of Macedonia as well organized fairs in honor of this god.<sup>10</sup>

6. IG V 2, 3; Jost (1985), 381–384; Chandezon (2000), 97 n. 114–115. See also the remarks in CID IV 463.

7. On the cult of Zeus as Eleutherios, see Raaflaub (1985), 71ff.

8. SNG ANS 746–748; Calciati II pp. 282, 147; SNG Cop. 784.

9. For epigraphic evidence from Macedonia on Zeus Eleutherios see EAM 93: Petres, Eor-daia, second/first century BC; IG X 2, 1, 32 (SEG 46.811): Thessaloniki, before the end of the first century AD.

10. The first century BC honorary decree of Kalindoia for Apollonios Apolloniou (SEG 35.744) noted the joined cult and priesthood of Zeus, Rome, and Caesar Augustus. Only Zeus and Augustus were honored with monthly sacrifices as well as games and sacrifices during a *panegyris* celebrated in their honor. The absence of Rome and the cult epithet *Eleutherios* may be explained by the fact that they both “became superfluous” with the introduction of the imperial cult. See Mellor (1981), 967.

The city of Pella, to which the coin was attributed on iconographic and stylistic grounds, housed an old and important cult of Zeus.<sup>11</sup> In this former capital of the kingdom and elsewhere, the cult of Zeus Eleutherios gained importance for some years. From this point of view, the celebration of a *panegyris* in his honor became a major event illustrating the strong ties of the Macedonian people with their liberators, the Romans. As with other fair coins, a single issue was planned from the outset and only one specimen is known.

#### *Apollo at Cassandrea*

The coinage in the name of Apollo was issued by Cassandrea in one single denomination, with types referring to the cult of Dionysos in the 270s, before the incorporation of the city in the Macedonian Kingdom by Antigonos Gonatas (Pl. 62, 5).<sup>12</sup> Literary (Xen. *Hell.* 5, 3, 18) and numismatic evidence emphasizes the importance of Dionysos's cult in southwestern Chalkidike,<sup>13</sup> while Apollo was also worshiped in this old colonial area.<sup>14</sup> In southwestern Chalkidike, the cults of Apollo and Dionysos were combined, and the coinage in the name of Apollo with Dionysian types was issued by the foundation of Cassander, whose *chora* comprised the entire peninsula of Pallene and territories north of the isthmus.<sup>15</sup> The coins may have served a festival in honor of these two gods. Festivals in honor of two distinct locally important deities were not unknown in antiquity; we may recall the *panegyris* in honor of Asklepios and Rhoites mentioned in an honorary decree for an *oikonomos*, presumably a Ptolemaic official, found at Doriskos (*IThrAeg* E400).

#### *Apollo Iatros (Apollonia Pontica)*

Apollo Iatros was the most important deity at Apollonia Pontica, and his sanctuary, on the small island opposite the city, was the *epiphanestatos topos* of the

11. Just. XXIV 2, 8; Paus. I 16, 1. Zeus was not venerated as Bottiaios at Pella, as was assumed on the evidence of Lib. *Or.* XI 76; 88 and Malalas 200. For previous bibliography and discussion, see Voutiras (2006), 43.

12. For the long discussions on the issuing authority, see Le Rider (1973), 76. New hoard evidence from the area of Cassandrea (*CH* IX 158) led to their interpretation as coins of Apollo and to their attribution to the southwestern Chalkidike: Sismanidis (1990 [1993]), 374; Touratsoglou (1993), 33 n.5; Hatzopoulos (1994), 178–179; (1996), 255. On Antigonos Gonatas and Cassandrea, see Hatzopoulos (1996), 205.

13. On the coinage of Aphytis: Gaebler, *AMNG* III/ 2: 44 no. 3, pl. XXXVIII 20. On Skapsa and its coinage: Psoma (2000), 119–126.

14. The evidence on the cult of Apollo is mainly numismatic and dates from the years preceding 348 BC (Psoma 2001). On Apollo and the colonists, see Malkin (1987), 88–91. On the early foundation of colonies in the Chalcidike, see Vokotopoulou (2001), 753.

15. On the *chora* of Cassandrea, see Hatzopoulos (1996), 120–121, 199–200.



city (Gauthier 1975, 172; Robert 1966, 46).<sup>16</sup> To Apollonia Pontica were attributed bronzes with the legend Ἀπόλλωνος Ἰατροῦ (Pick 1898, 169). The vocabulary and the mention of a *telamon* and of a sanctuary of Apollo point to the supposed attribution of IGBR 1114 from Batkun (*chora* of Philippoupolis) to Apollonia.<sup>17</sup> The inscription mentions a *panegyris*, and if our attribution to Apollonia is correct, this is the fair celebrated in honor of Apollo Iatros.

*Artemis Leukophryene (Magnesia on the Maeander)*

The extremely rare Hellenistic small bronzes from Magnesia on the Maeander with the legend Ἀρτέμιδος Λευκοφρυγ(νῆς) may also be connected with the fair celebrated in honor of Artemis, which is epigraphically well documented.<sup>18</sup> However, this was an extremely short episode in the history of the city's coinage and of the *panegyris*.

*Zeus Larasios and Zeus Eumenes (Tralleis)*

Zeus Larasios was the “πολισσοῦχος” of the city of Tralleis and the fair mentioned by an inscription of imperial date from Tralleis was most probably held to honor this same god (Head 1911, 659).<sup>19</sup> The bronzes in the name of Zeus Larasios (Διὸς Λαρασίου) and, after 188 BC, of Zeus Larasios and Eumenes (Διὸς Λαρασίου καὶ Διὸς Εὐμένου: SNG München 697–701) were most probably issued on the occasion of and for use at the *panegyris*.<sup>20</sup>

*The Great Mother (Pessinous)*

The bronze coinage with types referring to Kybele and Attis and the name of the

16. On the sanctuary of Apollo Iatros, see Robert (1966, 46, n. 6) and the dedications IGBR 399, 400, and 403. The decrees of the city were also erected there (IGBR 388, 391).

17. Apollonia's commercial relations with this area are attested by the presence of an important number of coins of this city in hoards buried in the area of Philippoupolis (IGCH 742, 749, 751; CH IX 59, 99 from Slivene) and by the edict of Pistiros (BCH 123 [1999] 248–251, 359–371), where the citizens of Apollonia (l. 32) are mentioned. See also Isaac (1986), 242, 246, n. 204; Archibald (1998), 131, 132, 137, 144, 215.

18. On these coins, see Bloesch (1997), no. 3462; Kinns (1989), 148, n. 57. On epigraphic evidence regarding the *panegyris*, see IMagnesia no. 31 l. 21, no. 33 l. 10, 17, no. 38 l. 14, no. 39 l. 16, no. 41 l. 7, 10, no. 43 l. 17, no. 44 l. 7, 45 l. 15, no. 46 l. 20, no. 50 l. 20, 43–44, no. 52 l. 13, 18, no. 53, l. 8, 54 l. 6, 32, 39, no. 56 l. 14, no. 57 l. 7, [58. 5], 61 l. 27, 56; 62 l. 4; 63 l. 8; 79 l. 6, 20; 82 l. 2; 85 l. 6, 17; 86 l. 7; 87 l. 7; 98 l. 13; 163 l. 6.

19. The sanctuary of the god, priests, and dedications are noted by inscriptions: ITral 8, 1–2; 20, 67; 23, 29; 28, 9; 51, 81–82; 81, 10–11; 82, 3–4; 141, 14–15; 142, 6–7. On the cult of Zeus Larasios in Tralleis, see ITral 8 p. 14 with previous bibliography and Cohen (1995), 268, n. 5. For the *panegyris* at Tralleis, see ITral 145; cf. SEG 49 (1999), 2413.

20. For Tralleis and its coinage in the names of Zeus Larasios and Eumenes, see Thonemann (2006).

Great Mother of Pessinous in Galatia (Μητρὸς Θεῶν or Μητρὸς Θεῶν Πεσσινέας) has been left aside in all discussions concerning coinages issued in the name of a god (Head 1911, 748).<sup>21</sup> Scholarly opinion has related it to the theocratic state.<sup>22</sup> It certainly derived from that theocratic state, but it can also be linked to commercial activities at this important religious center. Strabo (5.12.3) called the place an *emporion*, a trading center, “the largest west of the Halys river, where products from the Anatolian highlands were traded: grain and wool, textiles, hides and leather products.”<sup>23</sup> From the early second century BC onward, Pessinous even eclipsed Gordion, one of the major *emporion* in Galatia.<sup>24</sup> More evidence is provided by the analysis of the correspondence between Attalus II and Attis offered by B. Virgilio (1981, 81–82): “une monétisation propre du temple, outre à sous-tendre l’autonomie et la souveraineté du temple même et ses capacités et disponibilité économiques, était certainement fonctionnelle à la gestion économique et administrative interne de l’état sacerdotal et consentait au temple d’être arbitre de la valeur et de la disponibilité de la monnaie battue.”

### *The Festmünzen of Pergamum*

Various series of bronze coins of the second and first centuries BC from Pergamum were issued with the legends Ἀσκληπιοῦ Σωτήρος (SNG von Aulock 1371, 1372, 1373, 7487, 7492, 7493, ph. 6–7), Ἀσκληπιοῦ καὶ Ὑγείας (BMC 163, ph. 8),<sup>25</sup> Ἀθηνᾶς Νικηφόρου (SNG von Aulock 1374, 7489, ph. 9–10), and Ἀθηνᾶς Ἀρείας<sup>26</sup> (SNG von Aulock 7488, ph. 11). An explanation related to the *panegyris* was proposed by H. von Fritze for these bronze coinages with the types and names of Pergamene deities (von Fritze 1910, 5–6). Inscriptions from Pergamum provide evidence for various *panegyreis* in this city.<sup>27</sup> It cannot be a coincidence that we

21. See also Devreker and Waelkens (1984), 17, n. 67–69, and also 173–174; Devreker (1995), 85, no. 1; de Wilde (1997), 101; (1999), 187.

22. See Robert (1966), 44–45; Gauthier (1975), 171ff; Le Rider (1973), 76.

23. See Strubbe (2005), ix–xiv, esp. x and n. 7–9; Devreker and Waelkens (1984), 13–28, esp. 22; Broughton (1938), 820–821 (products of the area), 870–872 (fairs); Virgilio (1981), 80.

24. The close relations of the sanctuary of the Mother of the Gods with the Attalids who enlarged and embellished it (Str. 5.12.3), are also revealed by the correspondence of the Great Priest, with Eumenes II and Attalus II (*IPessin.* 1–7). The decision to strike a bronze currency with types and name of the Great Mother for local use at that important religious and commercial center could be related to Attalid influence.

25. See also Habicht (1969, 2, n. 8), from 190 BC onward.

26. Athena Areia was also mentioned as ἑνορκος θεά in *IPerg* 13 l. 24, 52 (*OGIS* 266: Eumenes and the revolted soldiers).

27. *IPerg* 252 l. 33–34: ἐν τῇ / πρώτῃ ἀχθησομένῃ πα[νηγύρει]; 253 l. 6–7: ἐν τῇ τῶν

find at Pergamum a number of different bronze *panegyris* coinages of the second and first centuries BC, while Hadrian, in his letter to the city some 150 years later, dictates that all fair transactions have to be made in bronze currency (OGIS 484).

While all previously mentioned coinages were issued by cities in charge of a *panegyris*, the monograms on the reverse of the bronze coins issued with the name of Athena Nikephoros and on those with the name of Asklepios Soter refer to city *ethnika* and thus reveal that both coinages were issued by an association of cities participating in these important cults. Both bronze coinages were struck at Pergamum and were excavated there.<sup>28</sup>

### THE ATTIC-WEIGHT SILVER COINAGES OF HELLENISTIC WESTERN ASIA MINOR

#### Athena Nikephoros (Pergamum)

The bronze issues with the name of Athena Nikephoros of Pergamum bring us to the second group of festival coinages: the Attic-weight silver coinages of Hellenistic western Asia Minor. The connection of the Attic-weight silver tetradrachms, smaller fractions, and bronzes with the legend Ἀθηνᾶς Νικηφόρου and types referring to the cult of this name with the *Nikephoria* of Pergamum, has been emphasized by numismatists and epigraphists (Pl. 63, 12). These coins were struck between 181 and 160 BC either on the occasion of the reorganization of the *Nikephoria* by Eumenes II in 181 or in connection with Eumenes's "bitter struggle with the Galatians" in the 160s and the final victory in 165 BC.<sup>29</sup> The monograms on the reverse of the small silver fractions and the bronzes refer to city *ethnika* and thus reveal that they were issued by an association of cities (Pergamum, Ephesus, Sardes, Laodicea, and Apamea) participating in the important cult of Athena Nikephoros (Le Rider 1973, 77, n. 1). "It was for the *panegyris* of Athena Nikephoros and in the vicinity of the sanctuary of this goddess, outside the Hellenistic city, that the πανηγυρικὸν γυμνάσιον noted in the inscriptions of Pergamum was established" (Robert 1966, 46).

Πανα/ [θηναίων πανηγύρει]; 454 l. 3 : ἀγορανομήσαντα καὶ πανηγυριαρχήσαντα (beg. of 1st century BC). See also *IPerg* 36 l. 6: καθευρόντα πανήγυριν for the Σεβαστοὶ Σωτῆρες.

28. Robert (1966), 46, n. 2. See p. 46: "on a relevé sur certaines des marques d'une origine non pergaménienne, suivant quelque système qui paraît original." On these coins, see von Fritze (1910), 28–30, 32; Le Rider (1973), 77, n. 1–2.

29. The *terminus ante quem* of 160 is provided by the presence of two known specimens in the Sitichoro, Thessaly hoard (*IGCH* 237) of c. 165 BC (Price 1989, 233ff.) and of one specimen in the Maaret-en-Nouman hoard (*CH IX* [2002] 511; Mattingly 1993, 83). A date in 181 BC was proposed by Mørkholm (1984, 187–192), while Price (1989, 239–240) connected this coinage with the war of the 160s against the Galatians.

## Athena Ilias (Ilium and the Other Cities)

The coinage of Athena Ilias (tetradrachms and drachms) with relevant types and the legend Ἀθηνᾶς Ἰλιάδος (Pl. 63, 13) was issued by the confederation of cities whose protecting deity was Athena Ilias; the relevant epigraphic evidence points to the participation of these cities in the annual festival of the goddess at her temple near Ilium.<sup>30</sup> These cities were all situated in northwestern Asia Minor: Ilium, Parium, Assus, Dardanus, Lampsacus, Abydus, Calchedon, and Myrleia. For L. Robert, the coinage in the name of Athena Ilias was connected with the “economic reality” of the fairs of the *Panathenaia* (Robert 1966, 38).<sup>31</sup>

## Artemis Pergaia (Perge, Aspendos, Phaselis, and Sillyon?)

The silver coinage of Artemis Pergaia (Ἀρτέμιδος Περγαίας: tetradrachms, drachms and hemidrachms) began during the third century and provides the earliest known example from Asia Minor of a silver coinage on the Attic standard issued in the name of a god (Pl. 63, 14) (Seyrig 1963: 39–40, 38–51, pl. IV–V; Le Rider 1973, 75–76; Mørkholm 1991, 30; Colin 1996). On the basis of the Athena Ilias coinage issued by cities participating in the cult and jointly celebrating the *panegyris*, a similar interpretation was proposed by L. Robert for the coinage of Artemis Pergaia (Robert 1966, 45–46). While there is no epigraphic evidence for such a confederation of cities, he argued from numismatic evidence provided by H. Seyrig: the Pamphylian cities of Perge, Aspendos, Phaselis, and Sillyon issued Alexanders following a system of “une ère semblable ou commune” (Seyrig 1963, 38–51, pl. IV–V).<sup>32</sup> The adoption of such a system was done “en toute souveraineté par ces villes voisines” and points to “une entente entre ces villes” that also had a religious aspect (Robert 1966, 46). L. Robert associated the coinage issued over a long period with the annual *panegyris* celebrated in the sanctuary of the goddess *extra muros*. Both the *hieron* and the annual *panegyris* were mentioned by Strabo (14.4.2: Πέργη πόλις καὶ πλησίον ἐπὶ μετεώρου τόπου τὸ τῆς Περγαίας Ἀρτέμιδος ἱερόν, ἐν ᾧ πανήγυρις κατ’ ἔτος συντελεῖται). If Robert’s assumption, followed by Le Rider, is correct, the coinage of Artemis Pergaia is connected with the *hieron* and the annual fair, the meeting point of these neighboring cities of Pamphylia (Robert 1966, 45–46).<sup>33</sup>

30. On Athena Ilias, see Robert (1966), 22–46; Le Rider (1973), 75; (2001), 42; Mørkholm (1991), 29. For the epigraphic dossier, see *Illion* 1–18. On the relations between Ilium and the Attalids, see Kosmetatou (2001), 107–132.

31. On the dates, see Le Rider (1973), 75.

32. Boehringer (1972, 57–58), followed by Le Rider (1973, 75–76), argued against the common Pamphylian era of Seyrig. A return to the common era and Seyrig’s dating of it was argued by Mørkholm (1978), 69–75. See also Boehringer (1999), 65–75, pl. 5–7.

33. On this important sanctuary, see Mackay (1990), 2050–2051, 2059ff.

## The Dionysiac Artists (Teos)

The last example from Hellenistic western Asia Minor is provided by the contemporary coinage of the Dionysiac Artists issued at Teos on the Attic standard (Lorber-Hoover 2003; Psoma 2007b). The single tetradrachm was struck with types referring to Dionysos; the legend is τῶν περὶ τὸν Διόνυσον τεχνιτῶν (Pl. 63, 15). In a previous publication, I related this coinage of the Dionysiac Artists issued at Teos with the well-known letter of Eumenes II to Teos that reports the dispute between the Hellespontine and Ionian association of Dionysiac Artists and its host-city Teos, over claims to festival revenues (Lorber-Hoover 2003; Psoma 2007b). The royal letter provides evidence for the Dionysiac Artists organizing the fair in the urban center of the city of Teos, while the civic authorities of Teos were responsible for the fair organized in the *chora* and at the harbors. This same royal letter planned the synoecism of the Teians and the Dionysiac artists that ultimately failed. It was most probably on these occasions of the synoecism and the celebration of the fairs in the city that the Artists issued their Attic-weight currency, naturally with royal approval.

Three of the silver coinages of western Asia Minor—of Athena Ilias, Athena Nikephoros, and the Dionysiac Artists—date from the years following the Peace of Apamea (188 BC) and all three came to an end before the mid-second century BC. After Apamea, a large part of western Asia Minor became part of the Attalid kingdom, and Eumenes II introduced a new currency, the *cistophori*, issued in different cities of the kingdom<sup>34</sup> with new types and a weight 25 percent lighter than that of the Attic tetradrachm (Pl. 63, 16) (Le Rider 1991, 164–169). As a consequence, Attalid Asia Minor very soon became a closed monetary zone reserved to the circulation of the *cistophori*: within the frontiers of the Attalid Kingdom, one silver Attic-weight tetradrachm could be exchanged with one silver *cistophorus* with a 25 percent gain.<sup>35</sup> Although hoard evidence reveals that the only legal currency of the expanded Attalid Kingdom of Asia Minor after the Peace of Apamea (188 BC), was the overvalued *cistophori*, Eumenes II (Pl. 64, 17) and cities linked with the kingdom (Pl. 64, 18) struck Attic-weight currency. The three silver “festival” coinages from western Asia Minor were contemporary with all other Attic weight civic and royal coinages of western Asia Minor. Two of the three, the coinage in the name of Athena Nikephoros and the coinage of the Dionysiac Artists of Teos, both emanated from issuing authorities under the rule of Eumenes II: Pergamum and Teos. “Ilion and the other cities” that issued the coinage of Athena Ilias did

34. On the list of cities that struck *cistophori*, see Le Rider (1990), 683–701; 1991, 361–376.

35. On Ptolemaic Egypt, see Le Rider (1986), 163–189. On the Attalids, see Le Rider (1989), 181.

not belong to the Attalid Kingdom. Thus, the coinage with the name of Athena Ilias falls into the group of Attic-weight coinages issued by cities that remained autonomous, such as Cyme, Myrina, etc.

Epigraphic evidence points to the use of Attic-weight currency in fairs during the second century BC. The decrees of Cyme in honor of Archippe (A2: SEG XXXIII 1036 l. 22, 24) mentioned that seventy Attic drachms were offered to the *boulê pandêmos* by Archippe for the purchase of the ox for the sacrifice. Big animals, slaves, and luxury objects were to be bought in annual *panegyris*: at Magnesia on the Maeander (*IMagnesia* 98), the most beautiful bull (ταῦρος ὡς κάλλιστος) had to be bought ἐν τῇ πανηγύρει ἐκάστου ἔτους (Chandezon 2000, 70–100).

The Attic-weight standard gave the participants different possibilities: either of keeping the coins for deals in the corresponding fairs of the following year or of using them in international transactions outside Attalid Asia Minor, in the kingdom of the Seleucids or in mainland Greece.<sup>36</sup> Even if the larger part of all three coinages found their way into Syrian hoards, the single specimen of Athena Nikephoros in the Larissa hoard provides evidence in this direction.

#### COMMENTARY

To sum up: coinages issued in the names of gods date from the Hellenistic period and were mostly issued in bronze. The silver coinages in the names of gods date from the Hellenistic period, followed the Attic standard, and were issued in western Asia Minor. Most of the bronze coinages and the coinage of the Dionysiac Artists were issued without control marks, with some exceptions: the coinage of Athena Ilias; the silver fractions and bronzes of Athena Nikephoros of Pergamum; the bronze coinage of Asklepios Soter, also from Pergamum; and the coinage in the name of the Great Mother of Pessinous.<sup>37</sup> While the Athena Ilias and probably also the Artemis Pergaia silver coinages were issued by associations of cities controlling important sanctuaries, the rare bronze coinages in the names of gods are linked

36. On the second century BC wreathed tetradrachms of the cities of Asia Minor, see Kinns (1987), 105–119; Le Rider (2001b), 37–59; Picard (1982), 245–250. All three arrived at the same conclusion: these coinages were issued by the cities of the Attalid kingdom for transactions with the outside world: Le Rider (1989), 164–169, 179–182. See also Houghton (2005), 57–58.

37. On Athena Nikephoros bronzes, see von Fritze (1910), 5–6. On Asklepios Soter, see SNG von Aulock 1371–1373, 7487, 7492 (name of Diodoros on the obverse), 7493 (initials of Diodorus on the obverse), and von Fritze (1910, pl. I 12), with the name of Demetrius on the obverse. On the coinage of the Great Mother of Pessinous that was also issued in three denominations, see Head (1911), 748; Devreker and Waelkens (1984), 17, n. 67–69, 173–174; Devreker (1995), 85, no. 1; de Wilde (1997), 101; (1999), 187.

with civic cults and fairs. This also seems to be true of the silver tetradrachm that was issued by the Dionysiac Artists based at Teos for use at the local fair. The types of the festival coinages refer mostly to the deity in honor of which the festival took place and in whose name the coinage was issued. In some cases, the association of two different cults can be detected: the Pergamene bronzes issued with the names of Asklepios and Hygieia, those with the Asklepios Soter legend and types referring to Apollo and the one-denomination bronzes from the area of Cassandrea issued in the name of Apollo with types referring to Dionysos.<sup>38</sup>

### Festival Coinages and Fairs

Recent research on fairs of the classical and Hellenistic periods has revealed the importance of festivals for the financial life of the city and the sanctuary.<sup>39</sup> Alongside purely religious activities, there took place a number of fiscal and profit-yielding activities. Exceptional merchandise, such as slaves, animals, and luxury objects, were sold at civic and rural fairs. The *pentekostê*, the *eponia*, the tax on slaves, and the *skênai* tax were all paid by the participants to the organizing cities.<sup>40</sup> These fiscal activities provided the organizers with a share of the fair-related profit. In exceptional cases, *ateleia* was offered to the fairs by cities or kings and is also noted in inscriptions (Chandezon 2000, 87–90). Magistrates in charge of the fairs, i.e., the *agoranomoi*, whose duties were later assumed by the *panegyriarchai*,<sup>41</sup> were appointed by the cities or religious associations, such as the *synedrion* of cities honouring Athena Ilias. Prizes were sometimes fixed by them.

Information about the means of exchange during the commercial part of the fairs derives from inscriptions and literary sources. Weights inscribed with the legend Διός were excavated at Olympia, Ἀπόλλωνος Θερμίου at Thermos, Ἀμφιαράου ἱερὸν at Oropos, and ἱερὰ Ἥρης at Samos, pointing to their use at the relevant sanctuaries.<sup>42</sup> From the second century BC Athenian law on the weight of the commercial mina, we learn that at Eleusis, a public slave kept an official set of standard weight and measures (*IG II<sup>2</sup>* 1013, l. 48–49 = Clinton 2005, no. 237) (Kroll 1993, 29–30). The second century BC Amphictionic decree imposed the ex-

38. von Fritze (1910), 41: “ein engerer, nicht nur mythischer, sondern auch kultischer Zusammenhang beider Götter, des Vaters und des Sohnes, bestand.”

39. On the meaning of the word *panegyris* (commercial part of a religious festival: Robert [1963], 67–69; religious festival: de Ligt and de Neeve [1988], 392–394). See also Chandezon (2000), 74–76.

40. See previous note. On that *skênai* tax, see Knoepfler (1988, 287–288) (= *SEG* 38 [1988] 380) of 100 AD.

41. On the *agoranomoi*, see Migeotte (2005), 289–299.

42. Hitzl (1996), 49ff. (Olympia), 122 (Delphi), 127 (Samos). See Pernice (1894), no. 781. For Thermos, the information comes from the Numismatic Museum of Athens.

change rate of the Attic tetradrachm (*CID* IV 127) at four silver (Attic or reduced Aeginetan) drachms for the fairs organized by the cities “of all Hellenes.”<sup>43</sup> A letter of Hadrian to the city of Pergamum (*OGIS* 484) mentioned the exclusive use of bronze currency during the *panegyreis* (Wörrle 1988, 212, n. 165). As Dio Chrysostom noted (*Res. Chrys.* 3 [*PG* 50.438]; *Pasch.* 4 [*PG* 52.770]), all fair transactions had to be conducted in cash (see de Ligt 1993, 58).

We can thus detect the purpose for which the rare festival coinages were issued: to provide a common currency and facilitate transactions at fairs attended by buyers and sellers with different currencies, where moneychangers were needed. During the fairs in question, these festival coinages were the only legal currency (*dokimon nomisma*),<sup>44</sup> and therefore all transactions had to use them (Bogaert 1968, 297). The participants were thus compelled by the organizers of the fairs, the *agoranomoi*,<sup>45</sup> to use the city’s standards for all transactions, to exchange their currencies for the currency in the name and with the types of the relevant god, and probably to pay an *agio* for this procedure.<sup>46</sup> At the end of the fairs, the currency in the name of the god had once more to be exchanged for the legal currency of the area.

Controlling the currency at the fairs and thus obtaining control of the fair itself was one of the main purposes fulfilled by festival coinages. At the same time, issuing a coinage with the types and name of the deity and imposing its use in the relevant fair accomplished the main purposes for which a local currency was designed. These were noted *expressis verbis* by the long honorary decree of Sestus for Menas that dates from the late second century BC (*OGIS* 339): civic pride and the profit emerging from issuing the city’s bronze coinage were the *raison d’être* of Sestos’s bronze coinage of the second century BC.<sup>47</sup>

A city that issued a festival coinage had to “protect” it, and controlling currency in the fairs was the best way to do this. However, these festival coinages were of a very restricted number. Almost every city celebrated its annual festival in honor

43. On *CID* IV 127, see Migeotte (2005), 292–293; Psoma (2007a).

44. On the term *argyron dokimon*, see Picard (1984), 679–690; (1996), 243–250; Knoepfler (1987), 235–241; (1989), 213–217. On *episëmon nomisma*, see also Martin (1991), 21–48.

45. Chandezon (2000), 81; Migeotte (2005), 293; on *Syll.*<sup>3</sup> 736, l. 99–101.

46. This *agio* was named *epikatallagê* in fourth-century inscriptions from Delphi (*FD* III 5, 25 II A 11: 344 BC; *FD* III 5, 58 l. 7 et 15: 331 BC) and Epidauros (*IG* IV [2] 1, 103 B 41). The term is also noted by Thphr. *Char.* 30. 15. On the exact meaning of the term, see Sosin (2000), 67–80, and Le Rider (2001a), 261–263.

47. On the coinage and this inscription see Robert (1973), 43–53; Martin (1985), 238–241; Le Rider (2001a), 242–247; and Martin (1996), 263: “Sestos desired its own bronze coinage because the coinage produced income for the city”.



of its most important deity, but very few coinages of the type described above are found. This shows that festival coinages in the Greek world were exceptional and an isolated phenomenon. We can thus understand why R. C. Knapp, on the basis of the evidence of foreign coins found at the sanctuaries of Nemea and Didyma, concluded that “the use of bronze coinage in commerce at the festival—purchasing sacrifices, souvenirs, staples for sustenance, and snacks from vendors—was perhaps much freer than in a town: sanctuaries had no coinage to protect. While there is much evidence of governments controlling currency in a town, there is no evidence for such control at sanctuary festival administered by towns” (Knapp and Mac Isaac 2005, 47). The rare festival coinages were an exception confirming this rule.

The small number of festival coinages and the short period during which these were issued in most cases must be emphasized. All bronze festival coinages are of Hellenistic date, and they were preceded by the Eleusinian coinage of Athens. We can thus assume that it was from the fairs of Eleusis, which were visited by people from all around the Greek world, that the idea spread. However, the introduction of a currency for use at the Eleusinian fair coincided with the reorganization and the systematic promotion of the fair by the city of Athens, and was thus most probably part of it. This may mean that there were similar cases at an earlier date, and this brings us to the most important fairs of the pre-Hellenistic world: Olympia and Delphi.

### Elis

The silver coinage on the Aeginetan standard, one of the most beautiful of all times, was issued by the Eleans, the very wealthy agricultural people who controlled the sanctuary through most of its existence: we find the initials of their *ethnikon* Εα(λιέων) on the reverse of the very first staters (Walker 2004; Kraay 1976, 16). The types refer to the cult of Zeus (Pl. 64, 19), while the beginning of the coinage was anchored to the so-called synoecism of Elis, for which dates around 471 BC have been arbitrarily proposed.<sup>48</sup> Another series with types referring to Hera was issued from the last decades of the fifth century BC to the end of the fourth century BC (Pl. 64, 20). As there are no shared dies between the two series, it has been suggested that two separate mints functioned at Olympia. There are a number of good reasons to suggest that both mints functioned at Olympia and that both series should be interpreted as festival coinages: “the sanctuary had

48. On the synoecism, see Roy (2002), 249–264. The earliest hoard with staters of Elis is the IGCH 35 from Lappa, Elis: Oeconomides-Caramessini (1989), 217–223, pl. L–LII. In this hoard, staters of Aegina dating from the late sixth century BC and the early fifth century are associated with early staters of Elis and a triobol of Lilaia, Phocis dating c. 480 BC. Thus, dates earlier than 471 BC could be proposed for the beginning of the coinage of Elis.

a real need for coins for the huge numbers of people who arrived for the Games . . . for the thousand of pilgrims and travelers; the chief deities of the city of Elis were neither Zeus nor Hera; Olympia is directly referred to on a number of dies; and, not least, the very fact that the coins were struck in two separate workshops." Walker's argument that this coinage functioned as a fair currency is supported by the weights brought to light by the excavations at Olympia, all inscribed Διός (Hitzl 1996, 49–50). A. Walker also emphasized that the early coinage of the Eleans was "consistently slightly underweight in comparison to other coinages on the Aeginetan standard," which shows that it was designed for local circulation during the games and the related fairs and also for visitors who "toured the sanctuary in the years separating the festivals." The extensive countermarking of all denominations points to their presence outside Olympia but also to Olympia itself: since the Eleans "produced a coinage for each Olympiad, previous issues were then demonetized and unusable unless revalidated by use of a countermark for which a fee was charged" (Kraay 1976, 16). Hoard evidence points to the wide circulation of that coinage in Elis, while isolated specimens, mainly fractions with very few exceptions, are to be found in a small numbers of hoards containing mainly currency on the Aeginetan standard. The interpretation of this splendid coinage as a festival coinage is not contradicted by the legend of the coins; the coinage was issued in two separate mints, each under the authority of the relevant sanctuary, by those who controlled both sanctuaries: the Eleans.

### Delphi

This interpretation of the Elean coinage as a festival coinage brings us to another coinage issued early in the fifth century at the important sanctuary of Apollo. This coinage, struck by the city of Delphi,<sup>49</sup> also followed the Aeginetan standard and was issued in small fractions.<sup>50</sup> The types refer to the sanctuary and its legends (Pl. 64, 21): a tripod and an *omphalos* (?). As at Olympia, the coinage was issued by

49. On the coinage of Delphi, see Svoronos (1896), 5–54.

50. I will not discuss here the heavy denominations on the same standard, tridrachms with two *rhyta* in the form of a ram's head placed side by side (Pl. 64, 22) and didrachms with one *rhyton*. These were issued by the city of Delphi before the deposit of the Asyut hoard (c. 475 BC). On their presence in Asyut, see Price-Waggoner (1976), 51–53. The *rhyta* depicted on the coins have been considered part of the spoils from the battle of Plataea on the basis of the rare presence of these vessels in mainland Greece before that date (Hoffman 1961, 21–26). This interpretation was rightly rejected by Price-Waggoner (1976), 52. Vessels of this type surely arrived at Delphi before the Persian Wars, while Delphi was not among the cities that confronted the Persians at Plataea (Hdt. 8.36, on Persians and Delphians on Mount Parnassos). Moreover, all known specimens, with one exception, the first Berlin specimen of unknown provenance, come from Egypt. Thus, "the possibility that

the city that controlled the sanctuary: the legend, *Δαλφικόν*, points to the city of Delphi. The importance of the control of the sanctuary of Apollo at Delphi needs no discussion. Like the coinage issued by the Eleans for the fairs at Olympia, the coinage of Delphi was intended for local circulation: the mid-fifth century BC hoard (*IGCH* 22) containing 252 trihemioibols was excavated at Delphi in 1896. Local use of this coinage is reflected in contemporary inscriptions, sacred laws of the city of Delphi noting taxes and funds that had to be paid in coined money (*CID* I 1ff.) to the city of Delphi (*CID* I 8) (see Picard 2005, 55–68). This coinage mostly served the needs of the sanctuary and most probably also of the fair, which was not that important at that moment. Thus, it is by far the oldest example of a coinage related to a sanctuary. However, this does not surprise the ancient historian, as we are at Delphi.

### The Amphictionic Coinage

Later in the fourth century, between autumn 336 and spring 334 BC, a silver coinage, also on the Aeginetan standard, was issued by the Amphictionic council (*Ἀμφικτιόνων*), the administrative body that controlled the sanctuary.<sup>51</sup> The so-called Amphictionic coinage was issued with types referring to the two sanctuaries controlled by the Amphictionic council: of Demeter at Pylai in Malis and of Apollo at Delphi (pl. 64, 23–24).

Very few specimens of the Amphictionic coinage are to be found. The only known hoard was found at Myonia, near Delphi in 1899 (*IGCH* 66). It was buried c. 335–330 BC and contained more than eleven Amphictionic staters and only one Athenian tetradrachm.<sup>52</sup> The minting period of the *kainon amphiktionikon* coinage dates from 336 to 334 and was slightly preceded by the appointment of a new board of magistrates: the twenty-four Amphictionic treasurers (Sanchez 2001, 145–146). One of the charges of this new board of Amphictionic magistrates was to supervise the minting of the Amphictionic coinage that remains the only coinage

this represents a single payment made by Delphi to Egypt should be seriously considered” (Price-Waggoner 1976, 52). It could also be related to information given by Herodotus on alum that was donated to Delphians by King Amasis of Egypt: see Svoronos (1896), 11; Price-Waggoner (1976), 52–53.

51. See Bogaert (1968), 109–110; Raven (1950), 1–22; Kinns (1983), 1–22, pl. I–V; Lefèvre (1998), 260–263; Sanchez (2001), 144–147. As I am not convinced that there is a connection between that coinage and the treasurers with the Macedonians, I will not enter into the details of the debate. For the bibliography, see Lefèvre (1998, 262, n. 469), who rejects that interpretation adopted recently also by Marchetti (2004, 87–100).

52. Thus, hoard evidence points to local circulation and from that point of view brings additional evidence to the interpretation of that coinage as a purely local phenomenon; cf. Lefèvre (1998), 263.

for which we have epigraphic evidence (Sanchez 2001, 146): the treasury records mentioned above suggest that part of the silver of the treasury, some 145 talents of miscellaneous worn coinages, was reminted into the new Amphictionic coinage within two years (Kinns 1983, 15; *CID* II, p. 159; Lefèvre 1998, 260–263; Sanchez 2001, 144–147). The objective of this coinage was to provide the Amphictionic council with its own coinage of good weight. This could be used for various purposes, such as financing the building activity that continued at Delphi and Pylai down to the late 320s (Lefèvre 1998, 260–263), after the end of work on the temple of Apollo (335 BC) (Sanchez 2001, 148, citing *CID* II 62, col. IIB, l. 64–73). As far as building activity is concerned, the treasury records report the use of Attic and Aeginetan weight coins that were of good alloy and full weight for payments even after the introduction of the Amphictionic coinage (Sanchez 2001, 147, n. 131). Thus, financing building activity was not the main purpose of this coinage.

Like all coinages before and after it, the Amphictionic coinage was, for its issuing authority, the Amphictionic council, “un moyen d'affirmer son autorité” (Lefèvre 1998, 263)<sup>53</sup> and a kind of “artifice technique destiné à tirer le meilleur parti de sa fortune nouvelle” (Lefèvre 1998, 263). As is revealed by hoard evidence, the Amphictionic coinage was a purely local phenomenon and was used locally (Lefèvre 1998, 263). It was also short lived and issued without control marks. This evidence together with its types referring to the “Amphictionic” sanctuaries of Demeter and Apollo brings us to its use in the sanctuaries and at the *pylatides agorai*,<sup>54</sup> the fairs organized at Delphi on the occasion of the *pylaiai*, the two annual meetings of the Amphictions.<sup>55</sup> The first was celebrated in autumn (*oporinêpylaia*), during the months of Boathoos or Heraios, and the second in the month of Endyspoitropios (early spring: *earinê pylaia*).<sup>56</sup> After a sacrifice in the sanctuary of Demeter at Pylai (Hdt. 7.201: Thermopylai), the members of the Amphictionic council moved to Delphi (Lefèvre 1998, 193–196). We may see this coinage, too, in a similar perspective: introduced to provide the Amphictionic Council with its own money of good weight and alloy, it may for a period have served the *pylatides agorai* and functioned as a festival currency.<sup>57</sup>

53. See also Sanchez (2001, 147), who uses the term “propaganda”: “un monnayage de propaganda, qui devait montrer aux Grecs que le Conseil amphictionique avait repris le contrôle des affaires sacrées à Delphes et à Anthéla.”

54. The Amphictionic coinage was first related to these markets by Head (1911, 341–342), on the evidence of its types. See also Mørkholm (1991), 86. On the *pylatides agorai* see infra.

55. On the *Pylaiai*, see Lefèvre (1998), 183–217.

56. See now Lefèvre (1991), 579–594; (1998), 197–204.

57. A century later, the *asphaleia* of those who were going to the *panegyreis* was noted by the Amphictyonic decree that granted *asylia* to the Aetolians (*CID* IV 33, p. 122–131).

Evidence for the *pylatides agorai* at Delphi is mainly literary.<sup>58</sup> The *chorus* of the Sophocles's *Trachiniae* (638–639) refers to their immense prestige from a religious and political point of view, panhellenic *kleos*.<sup>59</sup> However, literary sources note also the commercial part of the *pylaiai*: a *paroimia* collected by Plutarch (2, 5 = Zen. *Paroim.* 5, 36) concerning a certain Tyttigias who was active in the *Pylaiai* as a slave trader (*andrapodistes*) and a fragment of the play *Pylaia* by Alexis, which describes fish sellers (PCG II fr. 201 *apud* Ath. VI 7) give an idea of the commercial activity at the *pylatis agora*. In the same direction, Dio Chrysostom identified the *Pylaia* with a *panegyris* (Or. 77/78.4) while speaking about a *pornoboskos*. One of the products that were bought and sold during these fairs was hellebore (Thphr. *HP* 9, 10, 2, 6).<sup>60</sup>

Epigraphic evidence for the *pylatides agorai* remains scarce: an amphictionic decree for *hieromnemones* (CID IV no. 33 l. 5–9) and a third-century record (CID II 138).<sup>61</sup> The first decree explicitly mentions the fair (l. 8), while the second (l. 6–7) notes the merchants. We may add the well-known inscription fixing fish prices, which dates from the third century BC.<sup>62</sup> The Amphictionic fair was undoubtedly organized and run by the Amphictions, who accorded *ateleia* and sometimes a privileged position to participants (Sanchez 2001, 54, 475).<sup>63</sup>

Some aspects of the Amphictionic coinage shared with other festival currencies need to be stressed. As far as the issuing authority is concerned, the Amphictiony was a religious association *per se*, like the Dionysiac Artists of Teos and the confederations of cities honoring Athena Ilias, Athena Nikephoros and probably also Artemis Pergaia. Epigraphic evidence indicates that the Amphictiony shared “plusieurs similitudes de fonctionnement” with the confederation of cities honoring Athena Ilias.<sup>64</sup> As far as types, control of production, and duration are concerned, the Amphictionic coinage, like other *panegyris* coinages, was issued without control marks, was short lived, and its types referred to both sanctuaries of the Amphictiony.

58. See CID IV 134–135, 318, with n. 74 on no. CID IV 127, 463; Sanchez (2001), 50–57, 475.

59. See also Hesychios (s.v. *pylatides agorai*). Pseudo Scymnus spoke of an *agora amphytyonike* (600–601) referring to the meetings of the Amphictions.

60. See also Schol. in Av. 121 (mention of *probata*) and 766 with references to Cratinus's *Pylaia* (PCG IV fr. 180–192), where the poet speaks of the *λιαυ πονηποι*. See also Hsch. s.v. *pylaiastas* (*pseustas*).

61. CID IV 54, for a citizen of Naupaktos, the first *tente* in the *pylaia*.

62. Vatin (1966). It is no coincidence that Alexis in his *Pylaia* speaks about fish sellers. On this inscription and six others emanating from authorities that controlled fairs and mentioned prizes of fish, see Migeotte (1997), 39–43.

63. On control of fairs, see Migeotte (1997), 39–43; Chandezon (2000), 70–100.

64. Lefèvre (1998), 181, n. 111, 209, n. 217 (*Illion* no 1); 259, n. 447 (*Illion* no 10). See also CID IV 88–89.

Both "Delphian" coinages were issued by those who shared the control of the sanctuary: the city of Delphi in the early fifth century and the body of the Amphictions after the peace of Callicrates. From this point of view, they constitute a parallel for the coinage minted by the Eleans for the fairs at Olympia. From the coinage of Elis and the late archaic and early classical coinage of Delphi issued by those who controlled the festival, and from the contemporary Amphictionic coinage, all of which served as festival currencies, it becomes clear that the innovation made by Athens with the introduction of a coinage for the fairs at Eleusis was that the new fair currency was issued in bronze and had a fiduciary character.

The Athenians knew Olympia and Delphi, the games and the fairs, and knew how a fair currency could be used. It was in the mid-370s, some years before the introduction of the Eleusinian coinage, that the law of Nicophon introduced regulations on the circulation of coins in Athens and the Piraeus.<sup>65</sup> By issuing a bronze coinage for the Eleusinian festival, Athens expanded the exclusive use of Athenian ("Eleusinian") coinage to transactions of any scale, and thus incorporated the fair at Eleusis and the sanctuary at Eleusis visited by pilgrims throughout the entire year into its own monetary policy. At Eleusis, the Athenian coinage was used for large transactions,<sup>66</sup> while the Eleusinian bronzes served to buy the small items needed by the pilgrims: the legend of the "Eleusinian" bronzes referred to their use precisely at the Eleusinian fair at Eleusis. From this point of view, the "Eleusinian" bronzes strongly recall the various *Festmünzen* of Pergamum that this "new Athens" issued, with the name of the divinity for which the various *panegyreis* were celebrated: the coins were legal currency at the fairs and the sanctuary of the relevant god. If this was the intention of Athens at the beginning, things changed afterward, and the Eleusinian coinage became the bronze currency of the city.

#### The Bronze Coinages of the Mouseia of Thespieae and the Charitesia of Orchomenos

Bronzes with the portrait of Arsinoë III wearing a *stephanê* with a veil over it on the obverse and a lyre in a laurel wreath and the legend ΘΕΣΠΙ/ΕΩΝ on the reverse were issued by the Boeotian city of Thespieai at the end of the third century (220–210 BC) (Schachter 1961, 67–69). These bronzes were previously connected with the reorganization of the Mouseia (Schachter 1961, 68, n. 1, n. 3):<sup>67</sup> the lyre symbolized the music festival and the wreath the prize in the competition (στεφανίτης

65. On this law, see SEG XXX 59, XXXIII 77, XXXIV 62, XXXVI 145, XLI 41, XLV 44.

66. See IGCH 5 (late Archaic period), 46 (end of the fifth century BC), CHI 128 (Imperial period), VIII 15 (c. 510 BC).

67. On the reorganization of the Mouseia at Thespieae, see Knoepfler (1996), 141–167.

ἄγων), while Arsinoe was depicted and worshipped as the Tenth Muse. Although a reconsideration of the relevant epigraphic dossier by Knoepfler points to an earlier date in the 220s for the reorganization of this festival (Knoepfler 1996, 166–167), “at a later stage (210–208) an originally annual thymelic competition was raised to the status of a penteteric *agôn stephanites*; on this occasion Thespiiai solicited the support of Ptolemy IV, Antiochos III and Philip V (IG VII 2410)” (SEG XLVI 1996, 536).

A bronze coinage issued by the city of Orchomenos with the legend EXPO was linked with the *Charitesia*, a festival for the *Charites* (Graces) known from inscriptions dating from the second and first century BC.<sup>68</sup> The reverse type, tripod encircled by a laurel wreath, refers to the choragic monuments and an *agôn stephanites*, while on the obverse the female protome with *stephanê*, veil, and sceptre strongly recalls Ptolemaic gold coinages. This festival was also reorganized in the late third-century BC.

### CONCLUSION

Fair coinages are a rare phenomenon in Greek numismatics. All of them were issued with profit in mind and the ambition of publicizing the relevant god, its types, and the fair. During the classical period, the number of coinages issued for use at fairs is very restricted. The coinages of Elis and Delphi were struck by the cities that controlled the relevant fairs with their own *ethnikon* over long periods. The Amphictionic coinage, which was the first to be issued by a religious association *per se*, clearly differs from the other two, as it was short lived and emerged from the need to convert into good silver a significant number of talents of silver of bad weight. During the Hellenistic period, fair coinages were also of short duration and destined for local use. The main difference from the fair coinages of classical date is that the Hellenistic examples were issued in the name of the relevant gods and their issuing authority did not emerge from their inscriptions. The exception to the rule was the silver coinage of the Dionysiac Artists and the two small Boeotian bronze coinages. In all its details, the coinage of the Dionysiac Artists strongly recalls the Amphictionic coinage, while the two Boeotian coinages are linked to the silver coinages of Elis and Delphi; they bear the *ethnikon* of their issuing authority. The link between the two distinct categories is the bronze coinage of Eleusis, minted by the city of Athens over a long period inaugurated in the second half of the fourth century BC. As in many other cases, Athens foreshadowed the deep changes in mentality that occurred during the Hellenistic period.

68. Schachter (1961), 69–70; (1990), 140–144.

## KEY TO PLATES 62–64

1. Clazomenae. Second century BC. Tetradrachm (Attic) from H. Seyrig, *RN* 126 (1971): 24–25. Cf. Triton V Sale, Jan. 15, 2002, lot 258.
2. Eleusinian Coinage: Bankhaus Aufhäuser 10, München 1993, Nr. 75.
3. Athena Alea (Tegea): LHS Numismatik AG, Auction 96, May 8, 2006, no. 1752.
4. Zeus Eleutherios (Syracuse): Münzen & Medaillen Deutschland GmbH, Auction 17, October 4, 2005, no. 359.
5. Apollo (Cassandrea): Jean Elsen & ses Fils S.A. Auction 91, March 24, 2007, no. 30.
6. Asklepios Soter of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, pl. I 12.
7. Asklepios Soter of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, pl. I 24.
8. Asklepios and Hygieia of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, pl. I 23.
9. Athena Nikephoros of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, v. Fritze, pl. I 25.
10. Athena Nikephoros of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, v. Fritze, pl. I 27.
11. Athena Areia of Pergamum. Bronze. From H. v. Fritze, *Pergamum*, pl. I 28.
12. Athena Nikephoros, 160s BC. Tetradrachm (Attic): 16.75 g. Copenhagen. From Mørkholm, *Early Hellenistic Coinage*, 615.
13. Athena Ilias, 97–87 BC. Tetradrachm (Attic): 15.93 g. Copenhagen (SNG 362). From Mørkholm, *Early Hellenistic Coinage*, 652.
14. Artemis Pergaia, 255–240 BC. Tetradrachm (Attic): 16.69 g. London: BMC Lycia 119. I. pl. 24. From Mørkholm, *Early Hellenistic Coinage*, 482.
15. Dionysiac Artists of Hellespont and Ionia. Second century BC. Tetradrachm (Attic): 16.87 g. Lorber and Hoover, *NC* 163 (2003): 59–68, pl. 15.2.
16. Pergamum, c. 166–161 BC or earlier. *Cistophorus*: 12.42 g. Copenhagen: SNG 413. From Mørkholm, *Early Hellenistic Coinage*, 616.
17. Eumenes II (197–158 BC), 175–165 BC. Tetradrachm (Attic): 16.62 g. Paris, ex Bank Leu 33 (5.v.1983) 364. From Mørkholm, *Early Hellenistic Coinage*, 614.
18. Myrrina, c. 160–150. Tetradrachm (Attic): 16.05 g. Stockholm (SNG 2216). From Mørkholm, *Early Hellenistic Coinage*, 620.
19. Elis, 440–430 BC. Stater: 12.06 g. Numismatik Lanz München. Auction 135, May 21, 2007, no. 256.
20. Elis, 90. 420 BC. Stater: 12.15 g. Fritz Rudolf Künker Münzenhandlung. Auction 133, October 11, 2007, no. 8108.



21. Delphi. 520/460 BC. Hemiobol: 0.53 g. Fritz Rudolf Künker Münzenhandlung 67, October 9, 2001, no. 307.
22. Delphi, before 475 BC. Tridrachm: 18.55 g. Leu Numismatik AG 81, May 16, 2001.
23. Amphictionic Council, 336–334 BC. Silver Stater (Aeginetan): 12.27 g. Bank Leu 20 (25.iv.1978) 86. From Mørkholm, *Early Hellenistic Coinage*, 204.
24. Amphictionic Council, 336–334 BC. Silver Hemidrachm (Aeginetan): 2.95 g. New York: SNG Berry 585. From Mørkholm, *Early Hellenistic Coinage*, 205.

### REFERENCES

- AMNG III/2 = Gaebler, H. 1935. *Die Antiken Münzen Nordgriechenlands. Makedonien und Paeonien*, III/ 2: Berlin: Walter de Gruyter.
- Archibald, Z. H. 1998. *The Odrysian kingdom of Thrace. Orpheus unmasked*. Oxford.
- Bloesch, H. 1997. *Griechische Münzen in Winterthur II*. Winterthur.
- BMC = *A catalogue of Greek coins in the British Museum*. London: 1887–
- Boehringer, C. 1972. *Zur Chronologie mittelhellenistischer Münzserien 220–160 v. Chr.* Antike Münzen und Geschnittene Steine 5. Berlin: Walter de Gruyter.
- . 1999. Beobachtungen und Überlegungen zu den Ären der pamphyliischen Alexandreier. In *Travaux de numismatique grecque offerts à Georges Le Rider*, M. Amandry and S. Hurter, eds., 65–75. London.
- Bogaert, R. 1968. *Banques et banquiers dans les cités grecques*. Leiden.
- Broughton, T. R. S. 1938. *Roman Asia Minor*. In *An economic survey of ancient Rome IV*, T. Frank, ed., 499–918. Baltimore.
- BE = *Bulletin Epigraphique*.
- Callataÿ, F. de. 1986. Les derniers rois de Bithynie: problèmes de chronologie. *Revue Belge de Numismatique* 132: 5–30.
- . 1997. *L'histoire des guerres mithridatiques vue par les monnaies*. Numismatica Lovaniensia 18. Louvain-la-Neuve.
- . 1997b. Asie mineure hellénistique. In *A survey of numismatic research, 1990–1995*. Berlin.
- . 1998. Les monnaies hellénistiques en argent de Ténédos. In *Studies in Greek numismatics in memory of Martin Jessop Price*, R. Ashton and S. Hurter, eds., 99–114. London.
- Chandezon, C. 2000. Foires et panégyries dans le monde grec classique et hellénistique. *Revue des Etudes Grecques* 113: 70–100.
- Clinton, K. 1983. A law in the city Eleusinion concerning the mysteries. *Hesperia* 49: 258–288.

- . 2005. *Eleusis. The inscriptions on stone. Documents of the sanctuary of the two goddesses and public documents of the deme*. Athens.
- Cohen, G. M. 1995. *The Hellenistic settlements in Europe, the islands, and Asia Minor*. Berkeley.
- CH = *Coin Hoards I–IX*. 1975–2001. London: Royal Numismatic Society.
- Colin, H. J. 1996. *Die Münzen von Perge in Pamphylien aus hellenistischer Zeit*. Köln.
- CID IV = Documents amphictioniques. 2002. In *Corpus des inscriptions de Delphes IV*, F. Lefèvre, ed. Athens.
- Debord, P. 1982. *Aspects sociaux et économiques de la vie religieuse dans l'Anatolie greco-romaine*. Leiden.
- Devreker, J., and M. Waelkens. 1984. *Les fouilles de la Rijksuniversiteit Te Gent à Pessinonte 1967–1973 I*. Brugge.
- . 1995. Les monnaies de Pessinonte. Un supplément. *Epigraphica Anatolica* 24: 85–90.
- EAM = Rizakis, T. and G. Touratsoglou. 1985. *Επιγραφές Ανω Μακεδονίας* (Ελίμεια, Εορδαία, Νότια Λυγκηστis, Ορεστis). Athens.
- Fritze, H. von. 1910. *Die Münzen von Pergamum*. Berlin.
- FD III 5 = Bourguet, E. 1932. *Les comptes du IV<sup>e</sup>me siècle*, Fouilles de Delphes 3.5. Paris.
- Gauthier, P. 1975. Légendes monétaires. In *Numismatique antique. Problèmes et méthodes. Actes du colloque organisé à Nancy du 27 septembre au 2 octobre 1971 par l'Université de Nancy II et l'Université catholique de Louvain*, M. Dentzger, P. Gauthier, and T. Hackens, eds., 170–172. Louvain.
- Habicht, C. 1969. Die Inschriften des Asklepieions. In *Altertümer von Pergamum* 8.3. Berlin.
- Harl, K. W. 1987. *Civic coins and civic politics in the Roman East, AD 180–275*. Berkeley.
- Hatzopoulos, M. B. 1994. Ἀπολλωνία Ἑλληνis. In *Ventures into Greek history dedicated to N. G. L. Hammond*, I. Worthington, ed., 159–183. Oxford.
- . 1996. Macedonian institutions under the kings. *ΜΕΛΕΤΗΜΑΤΑ* 22. Athens.
- Head, B. V. 1911. *Historia numorum*. Oxford.
- Hitzl, K. 1996. *Die Gewichte griechischer Zeit aus Olympia*. Berlin.
- Hoffmann, F. 1961. The Persian origins of Attic Rhyta. *Antike Kunst* 4: 21–26.
- Houghton, A. 2005. Seleucid coinage and monetary policy of the second century BC. Reflections on the monetization of the Seleucid economy. In *Le roi et l'économie. Autonomies locales et structures royales dans l'économie de l'empire seleucide. Actes des rencontres de Lille (23 juin 2003) et d'Orleans (29-30 janvier 2004)*, *Topoi. Orient-Occident, Suppl.* 6, 49–79. Lyon.

- IG = *Inscriptiones Graecae*. 1873-. Berlin: Walter de Gruyter.
- IGBulg = Mihailov, G. 1956-1997. *Inscriptiones Graecae in Bulgaria repertae*. Sofia.
- IGSK = *Inschriften griechischer Städte aus Kleinasien*.
- IMagnesia = Kern, O. 1900. *Die Inschriften von Magnesia am Maeander*. Berlin.
- IMagn.Sip = Inken, T. 1978. *Die Inschriften von Magnesia am Sipylos*. In IGSK 8.
- IPerg(amon) = Fränkel, M. 1890-1895. *Die Inschriften von Pergamum*. Berlin.
- IThrAeg = Loukopoulou, L. D., M.-G. Parissaki, S. Psoma, and A. Zournatzi. 2005. *Inscriptiones antiquae partis Thraciae quae ad ora maris Aegaei sita est*. Athens: Research Centre of Greek and Roman Antiquity.
- ITrall = Polojakov, F. J. B. 1989. *Die Inschriften von Tralleis und Nysa. Teil I: Die Inschriften von Tralleis*. IK 36, 1. Bonn.
- IGCH = Thompson, M., O. Mørkholm, and C. M. Kraay, eds. *Inventory of Greek coin hoards*. 1973. New York.
- Isaac, B. 1986. *The Greek settlements in Thrace until the Macedonian conquest*. Leiden.
- Jones, C. P. 1974. Diodoros Paspáros and the Nikephoria of Pergamum. *Chiron* 4: 183-205.
- . 2000. Diodoros Paspáros revisited. *Chiron* 30: 1-14.
- Jost, M. 1985. Sanctuaires et cultes d'Arcadie. *Etudes Peloponésiennes* 9. Paris.
- Kinns, P. 1983. The Amphictionic coinage reconsidered. *Numismatic Chronicle* 143: 1-22.
- . 1987. Asia Minor. In *The coinage of the Roman world in the late republic. Proceedings of a colloquium held at the British Museum in September 1985*, A. M. Burnett and M. H. Crawford, eds. British Archaeological Reports 326: 105-119.
- . 1989. Two studies in the silver coinage of Magnesia on the Maeander. In *Kraay-Mørkholm Essays, Numismatic Studies in Memory of C. M. Kraay and O. Mørkholm*, G. Le Rider et al., eds., 137-148. Publications de l'histoire de l'art et d'archéologie de l'Université catholique de Louvain 59. Louvain la Neuve.
- Knapp, R. C., and D. Mac Isaac. 2005. *Excavations at Nemea III. The coins*. Berkeley.
- Knoepfler, D. 1988. L'intitulé oublié d'un compte des naopes béotiens. In *Comptes et inventaires dans la cité grecque. Actes du colloque international d'épigraphie tenu à Neuchâtel du 23 au 26 septembre 1986 en l'honneur de J. Tréheux*, D. Knoepfler, ed., 263-294. Neuchâtel-Geneva: Faculté des Lettres-Librairie Droz S. A.
- . 1987/1989. Tétradrachmes attiques et argent «alexandrin» chez Diogène Laërce. *Museum Helveticum* 44: 233-253; 46: 193-230.
- . 1997. Alexandreion nomisma. L'apparition et la disparition de l'argent d'Alexandre dans les inscriptions grecques. Quelques réflexions complémentaires. *Topoi* 7 (1): 33-50.

- Kosmetatou, E. 2001. Ilion, the Troad and the Attalids. *Ancient Society* 31: 107–132.
- Kraay, C. M. 1976. *Archaic and Classical Greek coins*. London: Methuen.
- Kroll, J. H. 1992. Athenian bronze coinage and the propagation of the Eleusinian mysteries. *American Journal of Archaeology* 96: 355–356.
- . 1993. *The Athenian agora XXVI. The Greek coins*. Athens: American School of Classical Studies at Athens.
- Lefèvre, F. 1991. Remarques sur le calendrier des réunions de l'Amphictionie pyléo-délphique. *Bulletin de Correspondance Hellénique* 115 (2): 579–594.
- . 1998. *L'Amphictionie Pyléo-Delphique: Histoire et institutions*. Athens.
- Le Rider, G. 1973. Un tétradrachme d'Athéna Niképhoros. *Revue Numismatique* 128: 66–79.
- . 1986. Les alexandres d'argent en Asie Mineure et dans l'Orient séleucide au III<sup>e</sup> siècle a. C. (c. 275–225). Remarques sur le système monétaire des Séleucides et des Ptolémées. *Journal des Savants* (Jan.–Dec.): 3–51.
- . 1989. La politique monétaire du royaume de Pergame après 188. *Journal des Savants* (July–Dec.): 163–190.
- . 1990. Un groupe de cistophores de l'époque attalide. *Bulletin de Correspondance Hellénique* 114 (2): 683–701.
- . 1991. Monnayage cistophorique des Apaméens, des Praipénisseis et des Corpéni sous les Attalides. Questions de géographie historique. *Bulletin de Correspondance Hellénique* 115 (1): 361–376.
- . 2001a. *La naissance de la monnaie. Politique monétaire de l'Orient ancien*. Paris: Presses universitaires de France.
- . 2001b. Sur un aspect du comportement monétaire des villes libres d'Asie Mineure occidentale au II<sup>e</sup> siècle: leurs émissions de tétradrachmes de poids attique frappées entre 188 et c. 140. In *Les cités d'Asie Mineure occidentale au II<sup>e</sup> siècle a. C.*, A. Bresson and R. Descat, eds., 37–59. Paris: De Boccard.
- Ligt, L. de. 1993. *Fairs and markets in the Roman empire. Economic and social aspects of periodic trade in a preindustrial society*. Amsterdam: J. C. Gieben.
- , and P. W. de Neeve. 1988. Ancient periodic markets: Festivals and fairs. *Athenaeum* 66: 391–416.
- Lorber, C. C., and O. D. Hoover. 2003. An unpublished tetradrachm issued by the artists of Dionysos. *Numismatic Chronicle* 163: 59–68.
- Liampi, K. 2000. The circulation of bronze Macedonian royal coins in Thessaly. In *From the parts to the whole. Vol. 1: Acta of the thirteenth International Bronze Congress, held at Cambridge, Massachusetts, May 28–June 1, 1996*, C. C. Mattusch, A. Brauer, and S. E. Knudsen, eds., 220–225. *Journal of Roman Archaeology Supplementary Series* 39.
- . 2002. Die Einführung des Kultes des Zeus Eleutherios in Makedonien. Die

- numismatischen Zeugnisse aus dem Hortfund von Serres. *Athenische Mitteilungen* 117: 203–220.
- Mackay, T. S. 1990. The major sanctuaries of Pamphylia and Cilicia. *Aufstieg und Niedergang der Römischen Welt* II 18 (3): 2048–2082.
- Malkin, I. 1987. *Religion and colonization in ancient Greece*. Leiden: E. J. Brill.
- Marchetti, P. 2004. La fin des émissions de Larissa et le monnayage Amphictionique. *Obolos* 7: 87–100.
- Martin, T. R. 1985. *Sovereignty and coinage in classical Greece*. Princeton, N.J.: Princeton University Press.
- . 1991. Silver coins and public slaves in the Athenian law of 375/4 BC. In *Mnemata: Papers in memory of Nancy Waggoner*, W. Metcalf, ed., 21–48. New York: The American Numismatic Society.
- . 1996. Why did the Greek Polis originally need coins? *Historia* 45 (3): 257–283.
- Mattingly, H. B. 1993. The Ma'aret En Nu'man hoard. In *Essays in honour of Robert Carson and Kenneth Jenkins*, M. J. Price, A. Burnett, and R. Bland, eds., 69–86. London.
- Meadows, A. 1998. Parion. *Numismatic Chronicle* 158: 41–46.
- Mellor, R. 1981. The Goddess Roma. *Aufstieg und Niedergang der römischen Welt* 17 (2): 950–1030.
- Migeotte, L. 2005. Les pouvoirs des agoranomes dans les cités grecques. In *Akten der Gesellschaft für griechische und hellenistische Rechtsgeschichte 16. Vorträge zur griechischen und hellenistischen Rechtsgeschichte, Evanston, Illinois, 5–8 September 2001. Symposion 2001*, R. Wallace and M. Gagarin, eds., 287–301. Wien: Österreichische Akademie der Wissenschaften.
- Mørkholm, O. 1978. The era of the Pamphylian Alexanders. *American Numismatic Society Museum Notes* 23: 69–75.
- . 1984. Some Pergamene coins in Copenhagen. In *Festschrift für Leo Mildenberg. Numismatik, Kunstgeschichte, Archäologie*, A. Houghton et al., eds., 187–192. Wetteren: NR.
- . 1991. *Early Hellenistic coinage from the accession of Alexander to the peace of Apamea (336–188 BC)*. Cambridge: Cambridge University Press.
- Nicolet-Pierre, H., and M. Amandry. 1992. Les monnaies d'argent de Syros. In *Florealium Numismaticum. Studia in honorem Ulla Westermark edita*, H. Nilsson, ed., 295–306. Stockholm.
- Oeconomides-Caramessini, M. 1989. A propos du trésor de Lappa. In *Kraay-Mørkholm Essays, Numismatic Studies in Memory of C. M. Kraay and O. Mørkholm*, G. Le Rider et al., eds., 217–223. Publications de l'histoire de l'art et d'archéologie de l'Université catholique de Louvain 59. Louvain la Neuve.

- Picard, O. 1982. Les Romains et les émissions aux types d'Alexandre. *Annuario dell'Istituto Italiana di Numismatica* 29: 245–250.
- . 1984. Sur deux termes des inscriptions de la trésorerie d'Ai Kanoum. In *Hommages a Lucien Lerat*, 670–690. Paris.
- . 1992. Ο ρόλος της Μακεδονίας στην εξέλιξη του νομίσματος. In *Epistemonike Epeteris tes Etaireias Makedonikon Spoudon*, 133–139. Thessaloniki.
- . 1996. Monnaie όλοσχερής, monnaie de poids réduit, *apousia* en Eubée, à Délos et ailleurs. In *ΧΑΡΑΚΤΗΡ. Αφιέρωμα στη Μάντω Οικονομίδου*, 243–250. ΤΑΠΙΑ, Athens.
- . 2005. Les χρήματα d'Apollon et le debut de la monnaie a Delphes. *Topoi* 12–13 (1): 55–68.
- Pick, B. 1898. Thrakische Münzbilder. *Jahrbuch des deutschen Archaeologischen Instituts Athen* 13: 134–174.
- PCG = Kassel, R., and C. Austin, eds. 1983–1991. *Poetae Comici Graeci*. Berolini et Novi Eboraci.
- Price, M. J. The Larissa 1968 hoard (IGCH 237). In *Kraay-Mørholm Essays, Numismatic Studies in Memory of C. M. Kraay and O. Mørholm*, G. Le Rider et al., eds., 233–243. Publications de l'histoire de l'art et d'archéologie de l'Université catholique de Louvain 59. Louvain la Neuve.
- , and N. Waggoner. 1975. *Archaic Greek coinage. The Asyut hoard*. London.
- Prokopov, I. 2006. *Die Silberprägung der Insel Thasos und die Tetradrachmen des "thasischen" Typs von 2.-1. Jahrhunderts v. Chr.* Berlin.
- Psoma, S. 2000. Σκάψα και Κίθας. Η Νομισματική Μαρτυρία. *Ευλιμένη* 1: 119–126.
- . 2001. *Olynthe et les Chalcidiens de Thrace: Études de numismatique et d'histoire*. Stuttgart: Franz Steiner Verlag.
- . 2007a. À propos de drachmes d'argent du décret Amphictionique CID IV 127. *Zeitschrift für Papyrologie und Epigraphik* 160: 79–88.
- . 2007b. Profitable networks: Coinages, *panegyris* and Dionysiac artists. In *Networks in the Greek world, acts of the International Conference, Rethymno, May 26-28, 2006, Department of History and Archaeology, Institute of Mediterranean Studies, University of Crete*, *Mediterranean Historical Review* 22.2: 237–255.
- , C. Karadima, and D. Terzopoulou. 2008. *Coins from Maroneia and the classical city at the peninsula of Molyvoti. A contribution to the history of Aegean Thrace*. *ΜΕΛΕΤΗΜΑΤΑ* 62. Athens: Research Centre for Greek and Roman Antiquity.
- Raven, E. J. P. 1950. The Amphictionic coinage of Delphi, 336–334 BC. *Numismatic Chronicle* 111: 1–22.

- Raaflaub, K. A. 1985. *Die Entdeckung der Freiheit: zur historischen Semantik und Gesellschaftsgeschichte eines politischen Grundbegriffes der Griechen*. München: Beck.
- Robert, L. 1963. Review of Samothrace 2. 1. The Inscriptions on Stone by P. M. Fraser. *Gnomon* 35: 50–79.
- . 1966. *Monnaies antiques en Troade*. Droz.
- . 1973. Les monétaires et un décret hellénistique de Sestos. *Revue Numismatique* 128: 43–53.
- RPC = Burnett, A. M., M. Amandry, and P. P. Ripollès, eds. 1991–. *Roman Provincial Coinage*. London.
- Roy, J. 2002. The Synoikism of Elis. In *Even More Studies in the Ancient Greek Polis, Papers from the Copenhagen Polis Centre 6*, 249–264. “*Historia Einzelschriften*” 162.
- Sanchez, P. 2001. *L’Amphictionie des Pyles et de Delphes: recherches sur son rôle historique, des origines au II<sup>e</sup> siècle de notre ère*. Stuttgart.
- Schachter, A. 1961. A note on the reorganization of the Thespian Museia. *Numismatic Chronicle* 7 (1): 67–70.
- . 1981. *Cults of Boiotia*. London.
- SEG = *Supplementum Epigraphicum Graecum*. Leiden: Gieben, 1923–2005.
- Seyrig, H. 1963. Monnaies hellénistiques. VIII. Pergé. *Revue Numismatique* 118: 38–51.
- . 1971. Un tétradrachme énigmatique. *Revue Numismatique* 126: 24–25.
- Sismanidis, K. 1990 (1993). Έρευνες στην αρχαία Κασσάνδρεια και στα αρχαία Στάγειρα. *Archaïologiko Ergo ste Makedonia kai te Thrake* 4: 371–383.
- SNG von Aulock = *Sylloge Nummorum Graecorum Deutschland*. Sammlung H. S. von Aulock. 5. Mysien. München: 1957–6. Troas, Aeolis, Lesbos. Munich: Gebr. Mann, 1959–17. Nachträge II. Mysien, Troas, Aeolis, Lesbos. Munich, 1967.
- SNG Cop. = *Sylloge Nummorum Graecorum*. The Royal Collection of Coins and Medals, Danish National Museum, Copenhagen. 1942–.
- SNG München = *Sylloge Nummorum Graecorum Deutschland*. Staatliche Münzsammlung München. Berlin und München, 1968.
- SNG Sweden II = *Sylloge Nummorum Graecorum Sweden II*. The Collection of the Royal Coin Cabinet, National Museum of Monetary History, Stockholm part I. Stockholm, 1976.
- Sosin, J. 2000. Agio at Delphi. *Numismatic Chronicle* 160: 67–80.
- . 2004. Alexanders and stephanephoroï at Delphi. *Classical Philology* 99: 191–208.
- Strubbe, J. 2005. The inscriptions of Pessinous. In *IGKS* 66. Bonn.
- Syll.<sup>3</sup> = Dittenberger, G., ed. 1915–1924. *Sylloge inscriptionum graecarum*. Leipzig.
- Svoronos, J. N. 1896. Νομισματική τῶν Δελφῶν. *Bulletin de Correspondance Hellénique* 20: 5–54.

- Thonemann, P. 2006. Μαίανδρος: *Studies in the historical geography of the Maeander valley*. D.Phil. thesis, Oxford University.
- Touratsoglou, I. P. 1993. *The coin circulation in ancient Macedonia (ca. 200 BC–268–286 AD). The hoard evidence*, *Bibliotheca of the Hellenic Numismatic Society* 1: Athens.
- Thompson, M. 1942. Coins for the Eleusinia. *Hesperia* 11: 213–229.
- Virgilio, B. 1981. *Il tempio stato di Pessinunte fra Pergamo e Roma nel II–I secolo a. C.* (C.B. Welles, *Royal corr.*, 55–61). Pisa: Giardini.
- Vokotopoulou, I. 2001. Greek colonization in the littoral of Chalkidike and lower Macedonia. In *Ηπειρωτικά και Μακεδονικά Μελετήματα* II, 439–761. Athens: P. L. Vokotopoulos/Archaeological Society at Athens.
- Voutiras, E. 2006. Le culte de Zeus en Macédoine avant l'époque romaine. In *Rois, cités, nécropoles. Institutions, rites et monuments en Macédoine. Actes des colloques de Nanterre (décembre 2002) et d'Athènes (janvier 2004)*, A.-M. Guimier-Sorbets, M. B. Hatzopoulos, and Y. Morizot, eds., 333–346. *ΜΕΛΕΤΗΜΑΤΑ* 45. Athens: Centre for Greek and Roman Antiquity, Athens.
- Walker, A. 2004. The coinage of the Eleans for Olympia. In *Coins of Olympia. The BCD collection*, Auction Leu 90 (May 10, 2004).
- Wilde, A. J. de. 1997. Au Musée de Pessinonte. *Epigraphica Anatolica* 28: 101–114.
- . 1999. Au Musée de Pessinonte (suite). *Epigraphica Anatolica* 31: 187–195.
- Wörle, M. 1988. *Stadt und Fest im kaiserzeitlichen Kleinasien. Studien zu einer agonistischen Stiftung aus Oinoanda*. München: C. H. Beck.





## Numismatic Evidence on the Ptolemaic Involvement in Thrace During the Second Syrian War

SELENE PSOMA\*

This study presents a numismatic survey of the city of Byzantion that was renamed Ptolemais for a short period to honor Ptolemy II. It was after the intervention of the Ptolemaic fleet that the siege of Byzantion by Antiochos II came to an end.

In 2000, Melih Arslan and Ayça Özen published a hoard of bronzes, whose provenance from Eastern Thrace was further verified by the discovery of a second one (or another part of the same hoard) in that same area.<sup>1</sup>

The bronzes that were part of the Eastern Thrace hoard divide into three distinct groups. The first one was struck with Poseidon's head wearing *taenia* to the right on the obverse, a trident and the letters ΠΤΟΛΕΜ on the reverse. Two specimens of this first group appeared in the Eastern Thrace hoard. The second group, with Apollo's head to the right on the obverse and a filleted cornucopia and the legend ΒΑΣ ΠΤΟ on the reverse, is represented by two more specimens. Group III is represented by fifty-seven specimens, and to this belong all specimens of the other part of the hoard (or the second hoard) from Eastern Thrace whose discovery is reported by the authors. The bronzes of this group bear on the obverse a veiled

\*Selene Psoma, Research Center for Greek and Roman Antiquity, The National Hellenic Research Foundation, 48 Vassileos Konstantinou Ave., 11635 Athens, Greece. E-mail: spsoma@eie.gr, spsoma@atenet.gr.

1. M. Arslan and A. Özen, "A Hoard of Unpublished Bronze coins of Ptolemy Ceraunus," *American Journal of Numismatics* 12 (2000), 59–66.

female head to the right and the eagle on thunderbolt to the left on the reverse.<sup>2</sup> The legend is ΒΑΣΙ ΠΤΟΛΕ.

The publishers of the hoard attributed these bronzes to Ptolemy Ceraunus and noted that "if these coins are correctly attributed to Ptolemy Ceraunus, this scion of the Ptolemaic house might have emphasized his dynastic credentials by imitating the coinage of Egypt." The iconographic and stylistic similarity of the first two groups with issues of Byzantion and Bisanthe was also underlined by M. Arslan and A. Özen, as was the fact that the three groups were struck in Eastern Thrace.<sup>3</sup> This article offers some further observations concerning the denominations, the issuing authority of Groups II and III, and the dates of all three groups of coins from Eastern Thrace.

### DENOMINATIONS

The three different groups do not represent one and the same denomination. The similar diameter and weight of the first two (11–12 mm, 0.67–1.45 g) show that they represent the same denomination, the *chalkous*, which seems to be the smallest bronze denomination from the fourth century BC to the late Hellenistic period.<sup>4</sup> The bronzes with the standard Ptolemaic eagle on the reverse are heavier (ca. 2.5 g). They were most probably double *chalkoi*, or *dichalka*. This denomination, corresponding to a quarter (*tetartemorion*) of the light obol, is found in coinages struck by a number of issuing authorities in Thrace.<sup>5</sup>

### ISSUING AUTHORITIES

#### *The Ptolemaic Dichalka (Group III) and Chalkoi (Group II)*

The legend of the bronzes of the Eastern Thrace hoard Groups II and III, the cornucopia, and the standard Ptolemaic reverse type of Group III, the eagle on thunderbolt, like the anchor for the Seleucids, became a sort of *Hauswappen*, or coat of arms, for the Ptolemies from the beginning of the third century BC.<sup>6</sup> It clearly refers to a member of that royal house as the issuing authority of these coins. The identification of the veiled female head on the obverse of Group III is helpful for attribution to a precise Ptolemaic ruler. Although this head could also be divine and

2. The thunderbolt is absent from some specimens; see *ibid.*, 60.

3. *Ibid.*, 60–61.

4. S. Psoma, *Olynthe et les Chalcidiens de Thrace. Etudes de Numismatique et d'Histoire* (Stuttgart, 2001), 125–131.

5. K. Chrysanthaki-Nagle, "L'histoire monétaire d'Abdère en Thrace (VI<sup>e</sup> s. av. J.-C. – II<sup>e</sup> s. ap. J.-C.)," *MEΛETHMATA* 51 (Athens, 2007), 162–163. On the term *dichalkon*, noted by Ptolemaic papyri, see S. Psoma (*op. cit.*), 132, n. 229–231.

6. Note the χαλκοῦν πτολεμαϊκὸν ἀετοφόρον of the Delian inventories.

identified with Demeter, an important deity in Byzantion, depicted on the obverse of Hellenistic issues of this city,<sup>7</sup> its striking similarity with the portrait of Arsinoe on precious-metal coins issued after her death by Ptolemy II supports an identification with Arsinoe. A small detail to note is the prominent diadem accompanying the veil of Arsinoe's royal portrait, which we can also observe in our bronzes.<sup>8</sup> Early portraits of Arsinoe occur on bronze issues of the city of Ephesus with the legend ΑΡΣΙΝΕ, which relate to the city's new foundation as Arsinoe by Lysimachus.<sup>9</sup> These coins date from the years preceding Corupedium and Lysimachus's death.<sup>10</sup>

### *Ptolemy Ceraunus?*

Arslan and Özen were correct in identifying the female veiled head with Arsinoe. They further suggested that she was depicted on these bronzes as Ptolemy Ceraunus's wife and queen. Although this is a possible identification, Ceraunus's choice of Arsinoe's portrait for the obverse of these bronzes is problematic for the following reasons.

Ceraunus was proclaimed king by Seleucus army in the vicinity of Lysimacheia.<sup>11</sup> His authority derived from the army assembly, and he did not need to marry his predecessor's wife to support his position.<sup>12</sup> He defeated Antigonus Gonatas in a sea battle in Thracian waters and left for Macedonia in a hurry to acquire a kingdom.<sup>13</sup> His strategic thinking did not keep him in Eastern Thrace but led him to Pella, at the heart of the Old Kingdom.<sup>14</sup>

7. E. Schönert-Geiß, *Die Münzprägung von Byzantion* (Berlin, 1970), 1131–1213, pl. 53–56.

8. R. H. J. Ashton, "Rhodian Bronze Coinages and the Earthquake of 229–226 BC," *Numismatic Chronicle* 146 (1986), 1–18; esp. 12–15.

9. G. Cohen, *The Hellenistic Settlements in Europe, the Islands, and Asia Minor* (Berkeley, Calif., 1995), 179.

10. To that same period is limited the founder cult of Lysimachus: see n. 9, above, and Chr. Habicht, "Gottmenschen und griechische Städte," *Zetemata* 27 (1970), 40–41.

11. On Ptolemaeus Ceraunus, see H. Volkmann, *RE* XXIII 2 (1959), s.v. Ptolemaios; H. Heinen, "Untersuchungen zur Geschichte der Zeit des Ptolemaios Keraunos," in *Untersuchungen zur hellenistischen Geschichte des 3. Jhts v. Chr.* (Wiesbaden 1972), 3–93 (= Heinen); K. Buraselis, "Das hellenistische Makedonien und die Ägäis: Forschungen zur Politik des Kassandros und der drei ersten Antigoniden (Antigonos Monophthalmos, Demetrios Poliorketes und Antigonos Gonatas) im Ägäischen Meer und in Westkleinasien," *Münchener Beiträge zur Papyrusforschung und Rechtsgeschichte* 73 (1982), 100, 102, 112, 152; A. Mehl, *Seleukos Nikator und sein Reich*, *Studia Hellenistica* 28 (Louvain, 1986), 318–321; D. Grainger, *Seleukos Nikator: Constructing a Hellenistic Kingdom* (London, 1990), 191–203. For Ceraunus's proclamation, see Heinen, *op. cit.*, 61–63, based on Memnon of Heraclea (*FGrHist* III B 434 F 8, 3).

12. See Heinen, *op. cit.*, 61–63, with full discussion and bibliography.

13. Heinen, *op. cit.*, 61–68.

14. On Ceraunus's strategic thought and military *virtus*, see Heinen, *op. cit.*, 30.

As king of Macedonia, Ceraunus came to terms with Antiochus I, Pyrrhus, and probably also Ptolemy II.<sup>15</sup> Arsinoe, his own half-sister and Lysimachus's widow, was his last opponent.<sup>16</sup> The story is well known: after the execution of Agathocles, by his half brother Ptolemy,<sup>17</sup> son of Lysimachus and Arsinoe, Ceraunus followed Lysandra, his own full sister and the widow of Agathocles, into exile at the court of Seleucus I of Syria.<sup>18</sup> After Lysimachus, Ceraunus then asked Arsinoe to marry him, after having sworn an oath to protect her children and give them back what they had lost with Lysimachus's death.<sup>19</sup> Arsinoe's two younger boys were with her at Cassandrea, while Ptolemy, the murderer of Agathocles, was far away under the protection of Monunius.<sup>20</sup> Arsinoe opened the doors of Cassandrea and decorated the city for her wedding to the Macedonian king. The marriage did not last and was most probably never consummated.<sup>21</sup> Ceraunus captured Cassandrea and established there a Macedonian garrison.<sup>22</sup> The two younger sons of Lysimachus and Arsinoe were immediately executed; only Arsinoe was allowed to leave for Samothrace.<sup>23</sup> She was the full sister of the king of Egypt, which saved her life.<sup>24</sup>

For the reasons discussed above, the choice by Ptolemy Ceraunus of the portrait of Arsinoe for bronzes issued a very long way from the territories under his control seems very unlikely. However, identification of the veiled female head with that queen and the legend brings us to another candidate, Ptolemy II Philadelphus.

15. Heinen, *op. cit.*, 68–74. See also E. Will, *Histoire politique du monde hellénistique* (Nancy, 19792), 104.

16. Heinen, *op. cit.*, 75–83; Will, *op. cit.*, 104. On the wedding of Ceraunus and Arsinoe, see also G. Longega, *Arsinoe II* (Rome, 1968), 57ff; A.-M. Vérilhac and Cl. Vial, "Le mariage grec du VI<sup>e</sup> siècle à l'époque d'Auguste," *BCH Suppl.* 32 (1998), 95.

17. We follow the hypothesis of Heinen, *op. cit.*, 6–13, 81–83.

18. Heinen, *op. cit.*, 6–17. On the dynastic weddings between members of the Ptolemaic and Lysimachus's court after Ipsus, see the short commentary by Will, *op. cit.*, 100–103: "un nœud de vipères."

19. Justin 24.2–3, 17.2.6–8; Heinen, *op. cit.*, 76–81.

20. Trogus *Proleg.* 24; Heinen, *op. cit.*, 75–83.

21. The description by Justin (24.2–3) of the *pompê* at Cassandrea points to the wedding of Ceraunus and Arsinoe at Cassandrea.

22. Heinen, *op. cit.*, 78–79. The Macedonian garrison was evacuated by Eurydice, Ceraunus's mother, some years later, in 278 BC. See also E. Meyer, in *RE Suppl.* X (1965), s.v. Poteidaia-Kassandreia, 629–630; M. B. Hatzopoulos, "Macedonian Institutions Under the Kings," *MEΛETHMATA* 22 (Athens, 1996), 202–203, with previous bibliography; *eiusdem*, "Le statut de Cassandree à l'époque hellénistique," *Ancient Macedonia V* (Thessaloniki, 1993), 575–584, esp. 583E.

23. Heinen, *op. cit.*, 79 n. 390.

24. Heinen, *op. cit.*, 13.

*Ptolemy II Philadelphus*

After the dramatic events at Cassandrea and the murder of her children by Ceraneus, Arsinoe was received by her full brother, Ptolemy II Philadelphus, in the court of Alexandria. The period of mourning for her two younger sons ended with Arsinoe's wedding to the King of Egypt, who for that reason repudiated his first wife, named also Arsinoe (I), a daughter of Lysimachus.<sup>25</sup> Ptolemy II honored his full sister and wife. Cities were named or renamed after the queen of Egypt, festivities were held in her name, and she received a cult after her death.<sup>26</sup>

Recent numismatic research suggests that the first Ptolemaic queen depicted on coins was Arsinoe II. Her portrait occurs on the obverse of the *mnaiēia* (100 silver drachms) and the *pentekontadrachma* (50 silver drachms) issued from 265/4 BC,<sup>27</sup> on the silver decadrachms that begin at the same date, and on the silver tetradrachms and the *mnaiēia* that date after 261/0 BC.<sup>28</sup> All Ptolemaic issues with

25. See Heinen, *op. cit.*, 79 n. 299, on Ps.-Plut. *Consolatio ad Apollon* 111f. The wedding took place between 279 and 274 BC; cf. Vêrilhac and Vial, *op. cit.*, 97. On Arsinoe I, see Just. 17.2.6–7, 24.2–3; and the short commentary of Will, *op. cit.*, 105.

26. For cities, see Cohen, *op. cit.*, 109 (Arsinoe Konope in Thessaly), 124–126 (Arsinoe Methana on the Peloponnese), 132–134 (Arsinoe Lyktou on Crete), 134–136 (Arsinoe Marion on Cyprus), 136–137 (Arsinoe near Palaipaphos and Arsinoe near Salamis on Cyprus), 137–139 (Arsinoe on Keos), 139–140 (Arsinoe Rithymnon on Crete), 329–333 (Arsinoe Patara in Lycia), 335–337 (Arsinoe in Pamphylia), and 363–364 (Arsinoe in Cilicia). For festivities: P. M. Fraser, *Ptolemaic Alexandria* (Oxford, 1972) 226, 232, 288. For her cult, see *ibid.*, 25, 28, 35, 191, 194, 216–218, 220, 225, 228, 234, 237–46, 298. On the establishment of a priesthood (Canephorus) of Arsinoe Philadelphus see *ibid.* 217, 222–224. For her death, the traditional date of summer 270 was defended by H. Cadell, “A quelle date Arsinoë II Philadelphos est-elle décédée?” in *Le culte du souverain dans l’Égypte ptolémaïque au III<sup>e</sup> siècle avant notre ère*, ed. H. Melaerts, *Studia Hellenistica* 34 (Leuven, 1998), 1–3, against July 1 or 2, 268 BC proposed by E. Grzybek, *Du calendrier macédonien au calendrier ptolémaïque* (Basel, 1990), 103–112, review by H. Hauben, *CE* 67 (1992), 143–171, esp. 160–162.

27. Her mother, Berenice I, is also depicted on these *mnaiēia*. For the bronzes that were attributed to Berenice I by Svoronos, see R. H. J. Ashton, *Numismatic Chronicle* 146 (1986), 1–18. Ashton attributes these bronzes to the city of Rhodes and dates them between 229 and 226 BC. The female head is consequently identified with Berenice II. According to Ashton (13, n. 31), the Coan didrachms with the presumed portrait of Berenice I (Svoronos XVIII 23) date from the middle of the fourth century BC.

28. A. Davesne, “Le trésor d’Aydincik 1974,” in *Trésors et circulation monétaire en Anatolie antique* (Paris, 1994), 37–43, pl. 2. For the gold and silver issues, see H. A. Troxell, “Arsinoe’s Non-Era,” *American Numismatic Society Museum Notes* 28 (1983), 35–70. For the bronze issues with the queen’s head, see J. N. Svoronos, *Tὰ νομίσματα τοῦ κράτους τῶν Πτολεμαίων* (Athens, 1904), pl. XI 23–24 (eagle on thunderbolt on the reverse, 16 mm), 29–30, 32–34, XVIII 22 (Triptolemos on the reverse, 17 mm), XXVI 16 (Ephesos).

the portrait of Arsinoe II are posthumous. Consequently, the bronze issues from Thrace should be dated after the introduction of the dead queen's portrait during the 260s and before the end of Philadelphus's reign (246 BC).<sup>29</sup>

Historical probability also points in this same direction. In a recently published paper, Avram has masterfully reconstructed the history of the region that includes Eastern Thrace during the last decade of the first half of the third century BC.<sup>30</sup> After putting literary<sup>31</sup> and epigraphic<sup>32</sup> evidence together, Avram concluded that it was in 255 BC that Antiochus II Theos campaigned in Thrace and was allied to the Greek cities of the west coast of the Black Sea and to local dynasts.<sup>33</sup> Antiochus II tried to capture Byzantion, an ally of Ptolemy II, and in spring 254, the city was saved after the intervention of the Ptolemaic navy, which continued its expedition to the Black Sea.<sup>34</sup> In the following months, the Ptolemaic military forces in the area interfered against Ziaelas in Bithynia.<sup>35</sup> All military operations in that area ended the following year (253 BC).

The small bronzes from Eastern Thrace, it may be suggested, constitute the numismatic illustration of these events and the Thracian front of the Second Syrian War, one of the *bella quam plurima* between Antiochus II and Ptolemy II.<sup>36</sup>

29. A. Davesne, *op. cit.* 38–42. Under Ptolemaios III, Berenice II was depicted on the obverse of numerous issues. On the main difference on Arsinoe's and Berenice's portraits, see Ashton, *op. cit.*, 12–15.

30. A. Avram, "Antiochos II Théos, Ptolémée II Philadelphie et la Mer Noire," *CRAI* 2003, 1181–1213. See Will, *op. cit.*, 102: "il est regrettable qu'on soit très mal documenté sur la Thrace," 211, 247–248.

31. Memnon of Herakleia *FGrHist* III B 434 F13 and 15; Polyaeus *Strat.* 4.16. See also Memnon of Herakleia *FGrHist* III B 434 F14 on the war for the succession of the Bithynian throne.

32. *IGBulg* I<sup>1</sup> 388: decree of Mesambria found in Apollonia, which mentions a campaign of Antiochos against the Astai; I. *Kallatis* 7: honorary decree for the citizens of Apollonia and Stratonax, son of Lygdamis; I. *Histriae* 112: dedication of soldiers involved in the defense of Apollonia, to the Dioskouroi; *IGBulg* I<sup>1</sup> 316: decree of Mesambria mentioning the [---Καλλ?]ατιανῶν σωτηρία; I. *Histriae* 4 and 16: an honorary decree for a doctor in relation with Histrian captives at Tomis; *IGBulg* I<sup>1</sup> 391: honorary decree of Apollonia for Aisias involving the good relations of Apollonia and Kallatis; I. *Kallatis* 106 on the liberation of Histrian captives; and I. *Histriae* 24 also on Histrian captives. These inscriptions refer to an alliance of West Pontic cities and the involvement of Antiochos II.

33. A. Avram, *CRAI* 2003, 1190–1201, 1202, and n. 55–59, 1210.

34. *Ibid.*, 1211.

35. *Ibid.*, 1212, on Memnon, *FGrHist* III B 434 F 14 [22] 2–3. It is in that same context that Ptolemaeus accorded special donations to the city of Heraclea described by Memnon, *FGrHist* III B 434 F 17 [24] and *supra* n. 43.

36. St. Jerome *Daniel* 11.6.

The Ptolemaic military authorities would have struck the bronze coinage in two denominations (groups II and III) in that area most probably for the *siteresion*, the everyday portion (*sitarchia*), of their soldiers. For the *chalkoi* (group II), they adopted the types of the allied city of Byzantion. For the *dichalka* (group III), different types were chosen: the standard Ptolemaic eagle on thunderbolt on the reverse and the portrait of the beloved dead queen, who happened to have been also “Queen of Thrace” earlier in her life and whose portrait was reminiscent of Demeter, an important female divinity of Byzantion depicted on its contemporary coins.

*The Chalkoi with the Types of Byzantion (Group I)*

*Byzantion-Ptolemais*

On the *chalkoi* issued with the types of the city of Byzantion (group I), the legend ΠΤΟΛΕΜ is not accompanied by the royal title, which could suggest their attribution to Byzantion renamed Ptolemais for a short period of time.<sup>37</sup> Alternatively, lack of evidence for such an event might suggest that a lack of space was the reason for the royal title's absence from these *chalkoi*. The Ptolemaic authorities realized the problem and a new issue of *chalkoi* (group II) was introduced with the royal title, which would explain the very limited number of specimens of group I. However, a short period during which the city of Byzantion, saved by Ptolemy II, took the name Ptolemais cannot be excluded. Ptolemy II received a cult in that same city.<sup>38</sup> If so, as in the case of other cities, the only evidence is numismatic.<sup>39</sup>

37. See also Arslan and Özen, *op. cit.*, 66.

38. A. Avram, *CRAI* 2003, 1203–1204, based on Dionysius Byzantius (*GGM* II 34), for Byzantion. Ptolemy I built a temple of Heracles at Heraclea: Memnon, *FGrHist* III B 434 F 17 [24].

39. Eurydicea Smyrna: Cohen, *op. cit.*, 180–183, based on F. Imhoof-Blumer, *JÖAI* 8 (1905), 229–230; Arsinoe Rethymnon: Cohen, *op. cit.*, 139–140, based on G. Le Rider, “Les Arsinoens de Crète,” in *Essays Presented to Stanley Robinson* (Oxford, 1968), 229–240; Antiochea Kebren in the Troad: Cohen, *op. cit.*, 148–151; Ptolemais Larisa in the Troad: Cohen, *op. cit.*, 157–159, based on J. and L. Robert, *JS* (1976), 175, n. 87, and L. Robert, *BCH* 106 (1982), 319–331; Seleucia on the Pyramus in Cilicia: Cohen, *op. cit.*, 371–372 with previous bibliography.





## A New Celtiberian Hacksilber Hoard, c. 200 BCE

PLATES 65–68

PETER G. VAN ALFEN,\* MARTÍN ALMAGRO-GORBEA,\*\*  
AND PERE PAU RIPOLLÈS\*\*\*

This study presents a Hacksilber hoard recently acquired by the ANS and argues for a significant role for Hacksilber in the monetization of Iberia in the third century BCE.

The American Numismatic Society (ANS) received in early 2007 a donation of 136 silver objects (2007.1.1–136) said to be a hoard found at some unknown date in the Iberian Peninsula. There is, unfortunately, no additional information that came with the hoard that might help to establish either a date or exact provenance for the material. Nevertheless, as can be seen in what follows, there is enough internal consistency in both the composition of the lot and the suggested dating of individual items that we are confident that this lot can be considered a single hoard. We cannot say, however, if this lot represents the entire hoard as found, or if there were additional objects, or coins, that were dispersed. Whether complete or not, we argue that the hoard as we have it dates to the end of the third or beginning of the second century BCE, and likely originated from the eastern zone of southern Celtiberia.<sup>1</sup> Although Hacksilber hoards from the second half of the first millennium BCE are not uncommon in Iberia, what makes this new hoard par-

\*vanalfen@numismatics.org

\*\*Real Academia de la Historia, León 21, 28014 Madrid, Spain (anticuario@rah.es)

\*\*\*Universitat de València. Avda. Blasco Ibáñez 28, 46010 Valencia, Spain (Pere.P.Ripolles@uv.es).

1. That is, towards the east of the present Province of Cuenca or in the inner territories of the present Province of Valencia; see Lorrio 1997; *id.* (ed.) 2001b.

ticularly significant is the tiny size of most of the fragments. It is argued below that these fragments served a parallel and complementary function as small change alongside, and at times in lieu of, circulating coinage.

This article is divided into four sections, the first of which discusses individual pieces of note in the hoard (a full catalogue is found in Appendix 1), the two following sections describe the metrology and chronology, and the final section offers our concluding arguments on the hoard's significance.

## THE HOARD

### Coins

Among the 136 silver pieces that comprise the hoard eight are identifiable as coins (nos. 1–8), only one of which is complete, the rest being cut into halves, quarters and smaller fragments. Three fragments cannot be attributed with any certainty, although one might be Gaulish (no. 6) and another might be a drachma with Emporitan types (no. 8). The remaining five coins are: one drachma of Arse-Saguntum (no. 1), three Iberian imitations of drachmas of Emporion (nos. 2–4), and a Dyrachium stater (no. 5). In spite of the small number of coins in the hoard, their presence is significant because they enhance our knowledge of the issues in circulation during the Second Punic War and the first years of the second century BCE.

The Arse-Saguntum issue (no. 1) is of particular interest since this is the first drachma bearing the types to come to light.<sup>2</sup> The date of this issue is uncertain, however. Basing his arguments on a metrological scheme that was developed from inadequate data, Villaronga (1967: 104 and 117ff.) suggested it was minted after 212 BCE, when the city had already been liberated by the Romans; since then he has further revised the date, recently suggesting the final years of the third century BCE (Villaronga 1994: 304–305). A date during the years of the Carthaginian occupation of the city (ca. 219–212 BCE) was a hypothesis defended by García-Bellido (1990b: 68–70), who based her arguments on the dispersion of these coins, the denominations struck, and their epigraphy. Her dates, however, have not stood up to continued scrutiny (see below).

A third chronological argument places the production date (long) before the Carthaginian presence in Arse-Saguntum. This dating has been defended by Marchetti (1978: 386–394), Crawford (1985: 343), and Ripollès and Llorens (2002: 279), and is based on the absence of this type in hoards buried during the years of the Second Punic War and the period following; if they were not hoarded at this later date it was because they were out of circulation entirely, or only small quantities remained in circulation at that time. Also, the iconography of the hel-

2. The types, female head wearing Corinthian helmet and legend *arseetar*, have been noted on fractional coinage; cf. Villaronga (1994), 305, nr. 4; Ripollès and Llorens (2002), nr. 23.

meted female figure on the obverse, copying Athena's portrait on the gold staters of Alexander the Great, suggests a date closer to the moment of widening use and diffusion of this iconographic model in the early third century.

The appearance of the drachm in this hoard might seem to lend credence to Villaronga or García-Bellido's dating for the series nearer the years of the Second Punic War. However, the high amount of wear on this piece (note also that it is pierced indicating perhaps that it served as jewelry for an extended period) suggests that it had long been in circulation by the time the hoard was closed around the end of the War (see section 4 below).<sup>3</sup> Note also the comparative freshness of the drachms found in the Valeria, Cheste or Tivissa hoards (*IGCH* 2333–5; Villaronga 1993: nr. 24, 27, and 39), which are likely dated to the earlier part of the third century. Although arguments based on wear are never conclusive because of the large number of variables involved, the evidence provided by this new hoard would seem to support a production date for the drachmas of Arse-Saguntum in the first half of the third century BCE.

The three imitation Emporion drachmas (nos. 2–4) are from various series that were minted in considerable volume (more than 278 obverse dies: Villaronga 1998: 91) during the years of the Second Punic War, a dating deduced from the chronology of the hoards in which the coins have been found (generally late third century or beginning of the second century BCE). The legends indicate that they were issued in diverse locations in the northeast of the Iberian Peninsula. Villaronga (1998: 107–108) has argued that these issues served to finance the Iberian military uprising against the Romans. There are, however, other possibilities that might also explain their existence: they could have equally served the interests of the Romans covering the substantial expenses generated by the war including, for example, the salary of mercenaries or auxiliary troops. Indeed, the designs and the weights of the Iberian imitations suggest that they played a role in some sort of coordinated financial contribution, which was demanded or voluntarily given by the different cities and territories of the northeast. The popularity of the Emporion-type drachms throughout the western Mediterranean would help in this function since their general acceptability was assured, while the expenses of production could be spread out among several allied communities. Also, the idea that the Iberian imitations were issued to finance the native uprising against the Romans fails as an explanation, since they were also minted by cities that were constantly under Roman political and military control, as was the case, for example, with Kese-Tarraco (Villaronga 1998: nos. 102–103).

3. It may also be worth noting that the degree of wear on this coin is similar to other coins that appear to have been in circulation for most of the third century, e.g., the tetradrachm of Antiochus I from the Cuenca-Guadalajara hoard (Ripollès, Cores and Gozalbes, forthcoming).

The presence of the Dyrrhachium stater (no. 5) underscores the fact that during the years of the Second Punic War coins from the eastern parts of the Mediterranean also circulated in Iberia—never in large quantities, but still they appear in many hoards.<sup>4</sup> Coins minted in Syracuse, Akragas, Neapolis, Tarentum, Metapontum, Athens, Macedonia, Thrace, Asia Minor mints and Dyrrhachium, have appeared in the Bretti (CH 9.709), Martos (CH 9.710), Moixent (IGCH 2328), Tangier (CH 9.689), Cuenca (CH 8.375), Villarrubia de los Ojos (CH 9.716), Valeria (IGCH 2334), Plana de Utiel (CH 9.725), X4 and Cuenca-Guadalajara hoards.<sup>5</sup> Regrettably, our Dyrrhachium stater is fragmented—only a quarter remains—which does not allow certain identification of the type, although the features of the *stellate* pattern design of the reverse suggests that it belongs to the group of issues dated between 300 and 200 BCE (cp. SNG Fitzwilliam Museum 2540; SNG Cop. 443–444). Because the coin exhibits little wear it seems reasonable to believe that this coin was minted towards the end of the third century.

The growing body of evidence for the presence of Greek coins in Second Punic War-period hoards is beginning to offer a better picture of the types of coins present and in what numbers they were reaching the west. Crawford (1985: 88) argued that the Greek coins found in the Iberian Peninsula came generally from the regions in the east where Roman troops were operating, and so made their way westward within a Roman military context. Such mechanisms for bringing the coins westward through Italy included the scale of the military activity, the great mobility of the troops in the central and western Mediterranean, and the booties obtained in the east (Crawford 1985: 58). There may have been other non-military mechanisms, like trade, as well, but in any event, the proportion of Greek coins circulating in the Iberian Peninsula was not great. As this hoard shows, any coins that reached Iberia during the turbulent years of the War, amidst the great financial stress that it brought, were almost certainly put to use, no matter where they were from or who produced them.

#### Jewelry Fragments and Hacksilber<sup>6</sup>

The great bulk of this hoard, as can be seen in Table 1, is composed of small silver pieces, which include jewelry fragments (nos. 9–35; 37.22 g total), rod fragments (nos. 36–52; 23.17 g total), ingot fragments (nos. 53–83; 29.44 g total) and plate fragments (nos. 84–136; 26.51 g total).

4. Arévalo (2002: 1–15) lists the individual Greek coins finds in Iberian hoards for this period.

5. See Villaronga (1993), nos. 11, 15, 18, 21, 25, 26, 27, 34; Sills (2003), 392, no. 77; and Ripollès, Cores, Gozalbes, forthcoming.

6. Martín Almagro-Gorbea, the primary author of this section, made his analysis of the objects based on photographs alone. Because he was not able to study the objects in hand, some of the identifications that follow must be considered preliminary.

Table 1. Components of the Celtiberian hoard

ANS 2007.1	N°	%	Accession No.
Coins	8	5.9	2007.1-8,
Fibulae	3	2.5	2007.1-14, 16?, 18
Decorated Sheets	3	2.5	2007.1-9, 17, 128
Decorated Vases	4	2.9	2007.1-10, 26, 28, 32?
Plain Sheet-fragments of Vases?	37	27.2	2007.1-84-87, 89, 91-96, 98, 100-105, 107, 110-115, 116?, 117, 119-121, 124, 125, 129, 130, 134, 135
Wire Torques	6	4.4	2007.1-13, 22, 27, 33, 36, 43
Massive Bracelets	16	11.8	2007.1-20, 21, 37-42, 44-48, 50-52
Band-bracelets with decoration	4	2.9	2007.1-12, 15, 24, 35
Band-bracelets without decoration	14	10.2	2007.1-11, 25, 29, 31, 88?, 90, 97, 109, 122, 126, 127, 131, 132, 136
Uncertain Objects	6	4.4	2007.1-19, 23, 34, 106, 108, 133
Ingots Fragments	35	25.7	2007.1-30?, 49?, 53-83, 99, 118?
<b>TOTAL</b>	<b>136</b>	<b>100</b>	

*Brooches or fibulae*

Three fragments (nos. 14, 16?, 18) probably belong to La Tène brooches with bilateral coiled wires and a foot turned towards the bow. Two of them (nos. 14 and 18) likely belong to brooches with a hollow bow, decorated with a line of silver grains along the upper border similar to a brooch from the Driebes hoard (San Valero 1945: fig. 3; Raddatz 1969: pl. 8, no. 7; *IGCH* 2336). The decorative composition, with rings and other soldered elements, is also similar to the brooches of the Pozoblanco (Raddatz 1969: pl. 47, no. 7; *RRCH* 174) and Santiago de la Espada hoards (Raddatz 1969: pl. 57, no. 8).

The third fragment (no. 16) may be a part of a foot of a turned La Tène-brooch, probably similar to the silver ones from Pozoblanco (Raddatz 1969, pl. 48, nos. 6 and 8; *RRCH* 174), Palencia (*ibid.*, pl. 32, no. 2; 42, no. 2), Chão de Lamas (*ibid.*, pl. 94, nos. 1-2) and Driebes (*ibid.*, pl. 8, no. 5; *IGCH* 2336), although the Driebes brooch has been interpreted as a neckring or torque end (San Valero 1945: fig. 1, no. 501). This particular type of foot is very common in the La Tène brooches of bronze (Argente 1994: type 8; Lenertz-de Wilde 1991: 22 s. fig. 12, 17, 30, etc.). There are also gold brooches with moulded feet in the Mairena del Alcor (Gómez 1985; 1989: 86) and Puebla de los Infantes hoards, both from Seville (*ibid.*, p. 87). These brooches also have parallel rings in the border, which served to fix the bow.

*Fragments of a decorated metal sheet*

Three fragments are of embossed decorated metal sheets (nos. 9, 17, 128) and all three could possibly be part of the same object: perhaps a decorative rectangular silver plate or band, likely fixed to some leather, wood or cloth object. Their iconography likely consisted of magical motifs, such as circles (possibly of solar meaning), and other sacred symbols, such as wolves-heads and aquatic-birds, all of them characteristic of the Celtic areas of Iberia, as demonstrated by the gold plates from the La Martela (Berrocal 1989) and Serradilla hoards (Almagro-Gorbea 1977: pl. XLVI, no. 1), both in Extremadura. This type of decorated plate with embossed decoration is also typical of other Iberian and Celtiberian silver hoards, such as the Mogón (Raddatz 1969: pl. 27, no. 2; *RRCH* 200) Salvacañete hoards (Raddatz 1969: pl. 49, no. 8; *RRCH* 205; *CH* 9.740). The same technique is also used in the Lusitanian *lunula* from the Chão de Lamas hoard (Raddatz 1969: pl. 90–91, no. 1).

*Fragments of decorated vases*

Three metal sheet fragments are decorated with die or embossed motifs (nos. 10, 26, 28); another fragment (no. 32) might also be part of a similarly decorated object. All the fragments have decorations near a thickened border, which is characteristic of Iberian and Celtiberian silver vases.

Fragment no. 10, with die decoration in a U-form, appears to be part of the moulding of a vase. This type of decoration is known from the Driebes hoard, with other close parallels from the Tivisa and the Chão de Lamas hoards.<sup>7</sup> However, this fragment might also be part of the base of a concave-convex decorated vase, similar to those dated to the end of the third or beginning of the second century BCE (Raddatz 1969: 79, 259).

No. 28 has a thicker moulding along the border and a pseudo-rope decoration made by using a chisel with a triangular point (note especially the mark made by this tool in the moulding of the border). This detail confirms that this moulding forms part of the external border of a vase inspired by a Hellenistic-Roman prototype, like the Fuensanta de Martos bowl from Jaén (Raddatz 1969: pl. 4, no. 3a) and a bowl from Santisteban del Puerto (*ibid.*, pl. 59, no. 5). This simple schema also appears in a vase of an unknown form from the Driebes hoard, perhaps the best parallel for this fragment, although it is of a much better quality.

The third fragment, no. 26, has a thick border below which there is a pseudo-rope moulding between two thinner mouldings, as well as a line of die triangles in schematic imitation of the classical *ovae* decoration. This decoration is charac-

7. Driebes (*IGCH* 2336): Raddatz (1969), pls. 8–11, especially pl. 10, no. 75; Tivisa (*IGCH* 2335): *id.*, pl. 71, nos. 3, 4, 6; fig. 24, no. 5; Chão de Lamas: *id.*, pl. 87, no. 1; and 88, no. 1.

teristic of Celtiberian vases as seen by examples from the Driebes hoard, in which there were vases decorated with *ovae* under the pseudo-rope moulding (Raddatz, 1969: pl. 8, nos. 18–30), and also decorated with die triangles filled with dots (*id.*, pl. 9, nos. 37–39). The same decoration is found on a concave-convex vase from the Province of Jaén (*id.*, pl. 31, no. 6). Both elements of this decoration appear in the Salvacañete hoard (*id.* pl. 50, nos. 1, 2, 4; *RRCH* 205; *CH* 9.740), but they are known outside of the Celtiberian area only on material from the Santisteban del Puerto hoard (*id.*, pl. 59, no. 3). Finally, fragment no. 32, although is it not a border fragment, might be a strip of die triangles similar to those on no. 26, and so may be from a similar vase.

#### *Plain fragments of vases*

The largest group of objects from the hoard—83 pieces, or 27.9% of the total—are fragments of plain silver metal sheets, most of them folded and crumpled.<sup>8</sup> This act of folding and crumpling, as well as the small size of some of the fragments, makes it especially difficult to discern the type of object these fragments come from. However, we can be reasonably certain that most of them are parts of broken vases or plates, a typical component of Celtiberian hoards. Some of the tiny fragments might also be fragments of silver bracelets, ingots or thick metal sheets (e.g., nos. 99, 105, 116, 118).

Folded and crumpled silver sheets from fragmented vases are known from the Driebes and Valeria hoards; broken vase fragments, but not crumpled, are also found in hoards of the Oretania area, such as the Pozoblanco and Santisteban del Puerto hoards.<sup>9</sup>

#### *Wire neckring and/or armring fragments*

Another group of fragments (nos. 13, 22, 27, 33, 36, and 43) can be attributed to neckrings or armrings made with silver wire, in many cases twisted. No. 13 belongs to an armring or string twisted neckring. This type of jewelry is common in Iberian silverwork, but the Ibero-Turdetanian examples usually have both thick and fine strings of a much more refined work.<sup>10</sup> The same characteristics

8. These are nos. 84–87, 89, 91–96, 98, 100–105, 107, 108, 110–115, 116?, 117, 119–121, 124, 125, 129, 130, 134, and 135.

9. Driebes (*IGCH* 2336): Raddatz (1969), pl. 8–11, 16; Valeria (*IGCH* 2334): *id.*, pl. 81, nos. 1, 11 and 12; Pozoblanco: *id.*, pl. 46, nos. 1, 5; 49, n1 7; Santisteban del Puerto: *id.*, pl. 58, no. 5; 59, nos. 1, 3, 5, 6; 61, nos. 1–3, 14; 62, no. 7; 65, no. 1.

10. Raddatz (1969), pl. 1, no. 2, from Badajoz; pl. 6, nos. 1–2, from Córdoba (*RRCH* 184): pls. 22 and 23, 25, and 26, from Mengibar; *id.*, pl. 28, from Mogón (*RRCH* 205); *id.*, pl. 32, from the Province of Jaén; *id.*, pl. 33, nos. 1–2, from Orellana la Vieja, Badajoz; *id.*, pl. 49, nos. 2 and 3, from Pozoblanco (*RRCH* 174); *id.*, pl. 56, nos. 2 and 4, from Santiago de la Espada; *id.*, pl. 66, no. 4; pl. 67, no. 2 and pl. 68, no. 1, from Santiesteban del Puerto.



are known from rings found in Iberian hoards from Tivisa, Tarragona (Raddatz 1969: pl. 69, 2; *IGCH* 2335) and Cheste, Valencia (Ripollès, Ribera 2005: 22; *IGCH* 2333), and from the neckrings of the *Vaccae*i and *Vettones* in North Meseta, and from a neckring found in Monsanto de Beira in Lusitania.<sup>11</sup> Unlike these examples, however, no. 13 has equal-size strings, a technical detail typical of neckrings from Celtiberian hoards, such as the Driebes, Valeria, and Salvacañete hoards, even though this detail can also be found in some neckrings from Palencia and Lusitania.<sup>12</sup> These kind of neckrings are generally not found in the Iberian area, although there are a handful of examples from the Santisteban del Puerto (Raddatz 1969: pl. 66, no. 2) and Torre de Juan Abad hoards (*ibid.*, pl. 79, nos. 2, 6, and 7), and two more in the Tivisa hoard (*ibid.*, pl. 69, no. 6; pl. 72, 6; *IGCH* 2335). As a general conclusion, even though these neckrings appear to have circulated widely within the region, they exhibit characteristics closest to Celtiberian silver work.

Fragments nos. 22, 27, 33, 36, and 43 belong to wires of circular cross section of various thickness. Nos. 27 and, perhaps, 33 are twisted, suggesting that they too may be pieces of a neckring or armring. No. 22, on the other hand, has a square end section, a feature generally corresponding to some type of closing in a torque (Raddatz 1969: pl. 14, no. 194; pl. 29, no. 3).

Nos. 22, 33, and 43 are simple wires, perhaps from bracelets or neckrings made with a simple wire.<sup>13</sup> Fragments of this type of wire with a circular cross section appear in the Celtiberian Driebes hoard; bracelets made of simple wire appeared in the Salvacañete hoard, suggesting they must have been a common objects in pre-Roman Iberian and Celtiberian silver-work.<sup>14</sup>

11. *Vaccae*i: Ripollès, Ribera (2005), pls. 34–38, 41, and 43; Delibes de Castro *et al.* (1993), fig. 2, nos. 1 and 2; fig. 6, nos. 2 and 8; *Vettones*: Fernández Gómez (1979); *id.*, (1986), fig. 27, no. 7; *Lusitania*: *id.*, pl. 96, no. 1.

12. Driebes (*IGCH* 2336): San Valero (1945), fig. 1, no. 24; Raddatz (1969), pl. 12, nos. 129–130 and pl. 13, nos. 131–138; Valeria (*IGCH* 2334): *id.*, pl. 81, no. 2; Salvacañete (*RRCH* 205): *id.*, pl. 51, nos. 1 and 2; Palencia: *id.*, pl. 32, nos. 2 and pl. 34, no. 2; *Lusitania*: *id.*, pl. 89, no. 2, from Chão de Lamas; pl. 93, 1, from Indalha; pl. 95, nos. 1, 3, and 4, from Monsanto de Beira.

13. Cf. Raddatz (1969), pl. 1, nos. 4–6, from Badajoz; *id.*, pl. 22, no. 3; pl. 23, no. 3, 4; pl. 25, no. 2, from Mengibar; pl. 28, no. 5, pl. 31, no. 4, from Mogón (*RRCH* 200); *id.*, pl. 32, no. 4, from Capsanes; *id.*, pls. 44, 45, from Palencia; *id.*, pl. 47, nos. 13, 20, from Pozoblanco (*RRCH* 174); *id.*, pl. 56, nos. 1, 3; pl. 61, no. 4; pl. 65, no. 2, from Santisteban del Puerto; *id.*, pl. 84, no. 3, from Cadaval; pl. 87, nos. 2–4, from Chão de Lamas; *id.*, pl. 96, no. 3, from Monsanto de Beira.

14. Driebes (*IGCH* 2336): Raddatz (1969), pl. 13, nos. 171–177; pl. 14, nos. 183, 185, 188–190; Salvacañete (*RRCH* 205): *id.*, pl. 52, nos. 4 and 5.

*Solid bracelet fragments*

Nos. 20, 21, 37–42, 44–48, and 50–52 appear to be fragments of a solid circular or polygonal section bar, usually used to make solid bracelets, a type of simple jewelry common in Iberian and Celtiberian silver working (Raddatz 1969: 111).

Most of these fragments have circular cross sections, but with different diameters (nos. 37–42, 44–48, 50, and 52). Bracelets of circular section are well known in Iberian silver work, with examples coming from Albacete, Utiel, El Centenillo, Jaén, Córdoba, Pozoblanco, and Santisteban del Puerto.<sup>15</sup> This type of bracelet also appears in the Vaccean and Vettones silver hoards.<sup>16</sup> However, neckrings with a solid circular cross section are only found in the Palenzuela 3 hoard (Delibes de Castro *et al.* 1993: fig. 2, no. 3), with another example coming from Monsanto de Beira, in Portugal (*ibid.*, pl. 95, no. 2). This kind of bracelet is also represented in the Celtiberian Salvacañete hoard, and many fragments of these bracelets were found in the Driebes and Valeria hoards.<sup>17</sup> Therefore, it is possible to attribute the ANS fragments more specifically to Celtiberian silver-work and to date them to the end of the third or beginning of the second century BCE.

Three other fragments of solid bracelets have a polygonal cross section (nos. 20, 21, and 51). To date, this type of jewelry has only been found in Celtiberian hoards, such as the Driebes and Valeria hoards, where fragments are also decorated, and the Salvacañete hoard.<sup>18</sup> This strengthens the arguments for the provenance and chronology of the circular cross section items discussed above, and helps to narrow the provenance for the hoard itself to the southern Celtiberian area.

*Decorated band bracelet fragments*

Four fragments (nos. 12, 15, 24, and 29) are likely parts of wide decorated band bracelets with a serpent or snake-form decoration. A traditional Mediterranean decorative element with symbolic and magical meaning, the snake-form was widely used in pre-Roman Iberian jewellery (Raddatz 1969: 111).

15. Albacete: Raddatz (1969), pl. 3, no. 3; Utiel: *id.*, pl. 3, nos. 4, 5; Lorrio (2001b), fig. 2, 4–5; El Centenillo, Jaén: *id.*, pl. 4, no. 4; Córdoba: *id.*, pl. 6, nos. 10, 11; Pozoblanco (RRCH 174): *id.*, pl. 47, no. 14; Santisteban del Puerto: *id.*, pl. 65, no. 3; pl. 66, no. 1; pl. 67, nos. 1, 3; pl. 68, no. 2.

16. Vaccean: Lorrio (2001b), pl. 38, no. 4; pl. 39; pl. 40, no. 2, from Palencia; Delibes de Castro *et al.* (1993), fig. 2, nos. 4, 5; Vettones: Fernández Gómez (1979); *id.*, (1986), fig. 27, no. 8.

17. Salvacañete (RRCH 205): Delibes de Castro *et al.* 1993, pl. 51, no. 9; 52, nos. 1, 3, 8–10; Driebes (IGCH 2336): San Valero 1945; fig. 2, no. 222; Raddatz (1969), pl. 13, nos. 152–169; Valeria (IGCH 2334): *id.*, pl. 81, nos. 4, 5, 14.

18. Driebes (IGCH 2336): San Valero (1945), fig. 1, no. 13; Raddatz (1969), pl. 13, nos. 145–151; Valeria (IGCH 2334): *id.*, pl. 81, nos. 3, 6; Salvacañete (RRCH 205): *id.*, pl. 51, no. 8.

Fragment no. 15 is probably the end of a bracelet decorated with a snake head motif, its eyes as two semi-spherical protuberances, another two at the end representing the nostrils. These anatomic details are common in this kind of bracelet, as are the thick borders and line of chisel dots in the center. This type of snake-form bracelets is known from several Iberian hoards, such as the Córdoba, Capsanes, Pozoblanco, Santisteban del Puerto and Tivisa hoards.<sup>19</sup> While the examples from these hoards tend to be more realistic, the Vaccean snake-bracelets are more schematic.<sup>20</sup> Other narrower snake-form bracelets are not close parallels to the pieces from this hoard.<sup>21</sup>

From the Celtiberian Driebes hoard come fragments of snake-form bracelets that have a preserved snake head on its end (San Valero 1945; fig. 7; Raddatz 1969, pl. 14, no. 196). Normally this element is lost (*ibid.*, pl. 14, nos. 197, 219), which makes it difficult to identify the typology. This type of bracelet is also present in the hoards from Salvacañete (*ibid.*, pl. 53, nos. 3 and 4) and Los Villares, Valencia (Martínez 1986; Lorio 2001: fig. 2,6), which confirms the use of this type of bracelet by the Celtiberians.

The schema of fragment no. 15 derives from Iberian prototypes, like the ones from Córdoba (*vid. supra*), but the Iberian bracelets have more realistic features than the die decoration of the Driebes piece, which is closest to the Vacceas examples belonging to the Celtic peoples from Meseta. Although there is no exact parallel for our fragment, the long head is reminiscent of the fragment of the Pozoblanco bracelet, and those from Capsanes and Los Villares. The eyes of no. 15, however, are closest to those on a gold brooch from Cheste (IGCH 2333).<sup>22</sup> Other examples of La Tène jewellery, like the bracelets from the Driebes hoard (IGCH 2336),<sup>23</sup> show a very different stylistic structure.

Fragment no. 12 has two rows of decorations made with a U-shaped die situated between the lateral and central borders. This decoration derives from an Iberian prototype, like that found on the Capsanes bracelet (Raddatz 1969: pl. 32, no. 5), but the technique used is not similar to that found on the Celtiberian or Vaccean bracelets. This could mean that this piece came from an unknown workshop in southern Celtiberia, perhaps near the Iberian Mediterranean region. The same can be said for fragments nos. 24 and 29.

19. Córdoba (RRCH 184): Raddatz (1969), pl. 6, nos. 9, 12, 13; Capsanes: *id.*, pl. 32, no. 5; Pozoblanco (RRCH 174): *id.*, pl. 47, no. 21, one with a philiform appendix: pl. 49, no. 4; Santisteban del Puerto: *id.*, pl. 60, no. 2; pl. 61, no. 8; Tivisa (IGCH 2335): *id.*, pl. 72, no. 7.

20. Raddatz (1969), pl. 36, no. 2; pl. 37, no. 3; pl. 40, no. 1; pl. 44, nos. 4–6, from Palencia; Delibes de Castro *et al.* (1993), 429, fig. 6, nos. 4, 5.

21. E.g., Delibes de Castro *et al.* (1993), pl. 1, no. 1, from Badajoz.

22. Ripollès and Ribera (2005), 22; Lenerz-de Wilde (1991), 159, fig. 117.

23. San Valero (1945), fig. 4, pl. 8; Raddatz (1969), pl. 7.

The fourth fragment, no. 35, is the most peculiar of our lot. Very narrow, it is decorated with two concave borders formed by two lines of triangles made with the point of a chisel, each along the side of the central convex rim. This detail is similar to that on no. 12, and to the Capsanes bracelet. It also ends in with a phili-form appendix like that on the Pozoblanco bracelet (Raddatz 1969: pl. 49, no. 4; *RRCH* 174), which is also similar to a Driebes badge/pin (Raddatz 1969: pl. 12, no. 97; *IGCH* 2336).

In sum, these bracelet fragments prove the existence of a Celtiberian jewelry tradition, different in its technical and stylistic features from those already known. This tradition seems to have been located in southern Celtiberia, but a region close to the Iberian Mediterranean might also be possible.

#### *Simple band bracelet fragments*

Thirteen fragments (nos. 11, 25, 29, 31, 88?, 90, 97, 109, 126, 127, 131, 132, and 136) are undecorated bands or parts of bands of different sizes probably prepared for use in bracelets. A number of them (nos. 25, 31, 88?, 90, and 131) show the characteristic two thick borders or rims typically seen on this type of bracelet. Although the type with thickened borders is not widely dispersed, simple wide-band bracelets are known from hoards from Badajoz (Raddatz 1969: pl. 1, no. 3) and Driebes (*ibid.*, pl. 14, nos. 224 and nos. 225, 226; *IGCH* 2336). The abundance of fragments in the ANS hoard could again point to a southern Celtiberian workshop.

#### *Unidentified fragments*

While exhibiting general traits of broken jewelry or plate, fragments nos. 19, 23, 34, 106, 108, and 133 cannot be placed under any specific rubric. No. 19 is a metal sheet with circular perforations, strengthened by a welded metal string border. No. 23 appears to be turned; its fabric also appears to be related to no. 106, a rolled up sheet with three decorative rises. This technical feature is reminiscent of the band-bracelets, but its function remains unknown.

No. 34 is a straight rod with a rectangular cross section narrowing towards one of its ends. A possible parallel, 64 mm long, came from the Santiago de la Espada hoard (Raddatz 1969: 250, no. 20; pl. 56, no. 6), but we have no suggestions for the type of object both of these rod fragments might have belonged to. No. 108 is a silver sheet with a metal string passing through a perforation; a possible parallel came from the Driebes hoard (*ibid.*, pl. 15, no. 258; *IGCH* 2336). Finally, no. 133 is a silver sheet in tubular form with a circular perforation, which might have been a part of a hollow bow of a La Tène-brooch (cf. nos. 14 and 16, *vid. supra*).

*Ingot fragments*

The second largest group of items from the hoard are 35 ingot fragments and silver smelting-drops (nos. 30?, 49?, 53–83, 99, 118?). These sorts of pieces are well known from pre-Roman silver Iberian hoards (Raddatz 1969: 54ff.; Hildebrand 1993: 172ff.). In Celtiberia, large ingots came from the Driebes hoard (Raddatz 1969: pl. 18, nos. 331–340; *IGCH* 2336), which included both smelting-drops and ingots (Raddatz 1969: pls. 19, 21). They also formed part of the Valeria hoard (*ibid.*, pl. 81, nos. 15–22; *IGCH* 2334) and “melted silver bars” were found in the hoards from Cheste and Los Villares.<sup>24</sup> Other silver smelting-ingot fragments come from Andalusian hoards: Cuesta del Rosario, in Sevilla, Martos, Cordoba, Santiago de la Espada and Santisteban del Puerto.<sup>25</sup>

While ingots of these types appear to be a frequent component of pre-Roman Iberian hoards generally, their presence also in Celtiberian hoards from Driebes, Valeria, Los Villares and Cheste (*IGCH* 2330, 2333–4, and 2336), could indicate that they are an important element of southern Celtiberian hoards more specifically.

## HOARD PARALLELS

The best general parallels for this hoard are the Celtiberian hoards from Driebes in Guadalajara, and Valeria in Cuenca;<sup>26</sup> other close parallels are the Hacksilber hoards of Cheste, Los Villares in Valencia, Cuesta del Rosario in Sevilla, Martos and Córdoba, and Santiago de la Espada and Santisteban del Puerto in the silver-mines region of the *Oretani*.<sup>27</sup>

A specific south-eastern Celtiberian provenance for this hoard is suggested by a number of the fragments, some of which have no parallels in other pre-Roman silver-working regions. Plate and vases with borders decorated with chisels are typically found in Celtiberian hoards, as are fragments of crumpled vases, which to date have appeared only in the Driebes and Valeria hoards, both of which also contain Gaulish coins *à la croix*, like the hoard of La Plana de Utiel (Ripollés

24. Cheste (*IGCH* 2333): Zóbel de Zangróniz (1878), 162–172; Ripollés and Ribera (2005), 19; Los Villares (*IGCH* 2330): Pla (1962), pl. 1, no. 6.

25. Cuesta del Rosario: Fernández Chicharro (1944), fig. 3; Martos: Villalonga (1983); Córdoba (*RRCH* 184): *id.*, pl. 6, no. 5; Santiago de la Espada: *id.*, pl. 56, nos. 8–13; Santisteban del Puerto: *id.*, pl. 61, nos. 7 and 12.

26. Driebes (*IGCH* 2336): San Valero (1945); Raddatz (1969), 210; Valeria (*IGCH* 2334): Almagro Basch and Almagro-Gorbea (1964); Raddatz (1969), 266 and ff.

27. Cheste (*IGCH* 2333): Zóbel de Zangróniz (1878), 162–172; Ripollés and Ribera (2005), 19; Los Villares (*IGCH* 2330): Pla (1962), pl. 1, no. 6; Cuesta del Rosario: Fernández Chicharro (1944); Martos: Villalonga (1983); Córdoba (*RRCH* 184): Raddatz (1969), pl. 6, no. 5; Santiago de la Espada: *id.*, pl. 56, nos. 8–13; Santisteban del Puerto: *id.*, pl. 61, nos. 7 and 12.

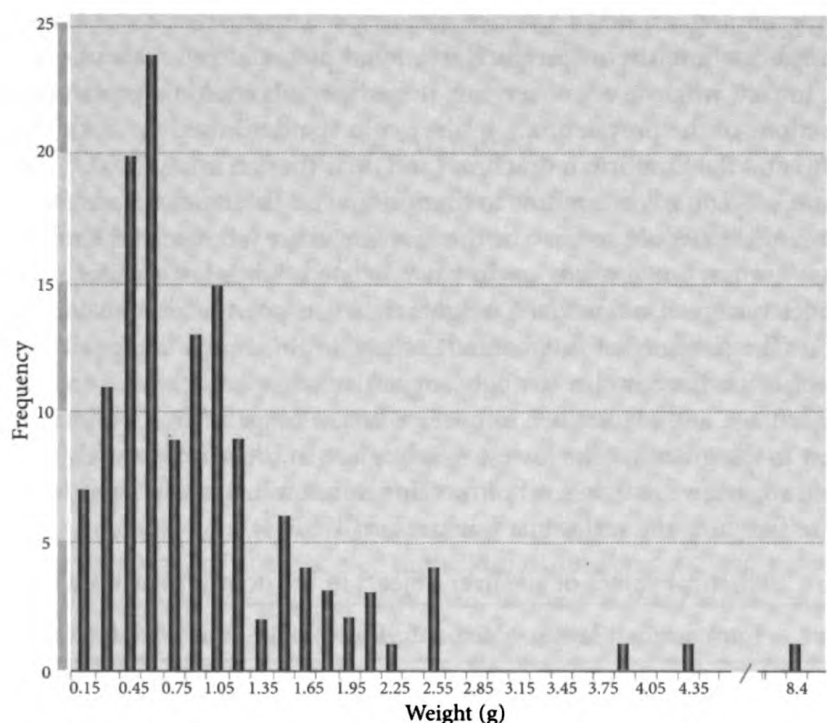


Fig. 1. Histogram of weights of all objects from the hoard.

1980). Bracelets of simple wire, twisted torques, and massive bracelets with circular cross section are widely dispersed across the Iberian Peninsula, but bracelets with polygonal cross section have only appeared in the hoards of Driebes, Valeria and Salvacañete, which points again to southern Celtiberia. The band-bracelet fragments from this hoard, with their crude decorative techniques excluding an origin from Andalusia and the Vaccaean territory, are perhaps from a heretofore unknown series of Celtiberian jewellery. Certain stylistic details of these fragments, particularly the emphasized semiglobular eyes of the snake-head on one of the pieces (no. 15), which is similar to those on the gold annular brooch from Cheste (see above), suggest that this new group came from the eastern zone of southern Celtiberia (see n.1 above).

### METROLOGY

The statistical analysis of the weight of all objects contained in the ANS hoard emphasizes the small size and weights of the items: 93% of the 136 pieces weigh less than 2 g. Although the weights of the individual pieces might appear quite irregular, peaks in the histogram (Fig. 1) show prominent groupings around the intervals of 0.45–0.60 g and 0.9–1.05 g, and less prominent, but perhaps still sig-

nificant groupings around 1.35–1.50 g and 1.95–2.10 g. These four concentrations might indicate a desire to produce fractional pieces at intervals of 0.5–0.6 g. If this is, in fact, what we are observing, these intervals could be explained as rational fractions of the prevalent 4.5 g silver coin standard used for both the Roman denarius and the Emporitan drachms (and their Iberian imitations).<sup>28</sup> Indeed, the peak at 0.45–0.60 g corresponds to Emporitan and Iberian fractions (see Conclusions below). As would seem to be the case elsewhere (cf. Kim and Kroll 2008, this volume), transactional needs could have dictated the use of smaller silver pieces in a wider variety of rationalized weights than was provided by the coinage in circulation. The presence of fragmented coinage in this hoard along with miniscule pieces of Hacksilber is also strongly suggestive of a parallel and complementary use of coinage and Hacksilber to cover a broad range of transactions, from the smallest to the greatest. The lowest weight piece in the hoard, no. 123 at just 0.03 g, is also suggestive of either very low value transactions, or the need for such tiny pieces to fine tune the scales in a transaction (Table 2).

Table 2. Statistical values of all silver objects in the hoard (measured in grams).

Number	Total weight	Mean	Median	Dev. stand.	Max. weight	Min. weight
136	126.62	0.931	0.73	0.9389	8.39	0.03

## CHRONOLOGY

While a number of pieces of jewelry from the hoard have parallels that can be dated to the end of the third century or beginning of the second century BCE, which have also appeared in hoards of Hacksilber that are analogous to the ANS hoard (García-Bellido 1990b: 110–111; Villalonga, 1993: 70 s.; Hildebrandt 1993: 186), it is the coins from this hoard that provide the best dating evidence. Of the coins, the fragments of Iberian imitations of Emporitan drachmas (nos. 2–4) suggest a burial date of around 200 BCE. It is clear from the X4 (Sills 2003: 392, no. 77) and Orpesa la Vella hoards (Ripollès 2005: 15–34), both of which contained a great quantity of these issues, that these coins had already been struck by 206 BCE. Despite their fragmented state, the preservation of the types on the drachms in the ANS hoard is good, indicating that the coins had not been in circulation long before they met the chisel. On this basis we propose that the hoard was buried within a reasonably short period after *ca.* 206 BCE. Whether this period was a few years later while the Second Punic War was still raging, or in the first decade of the second century

28. See Villaronga (2003) 77–81 and (1998), 45–56. The Roman denarius standard is more likely to have been used than the Carthaginian shekel standard (*c.* 7.20–6.8 g); see Villaronga (1973), 97–98.

after the war had ended, we cannot say with certainty, although the lack of Roman issues in the hoard (as we have it) could be indicative of an earlier date, before they had reached wider circulation in Iberia.

### CONCLUSIONS

That this hoard was assembled around the end of the Second Punic War has potentially significant interpretive consequences. In the final years of the third century, the Iberian Peninsula was the scene of competing interests and outright war between the most important powers of the western Mediterranean, generating some of the most impressive troop movements yet seen in the west. As the war between the Romans and the Carthaginians progressed, silver, especially in the form of coinage, increasingly became the primary means of financing the war (Marchetti 1978: 385; Villaronga 1984b). Both warring parties were motivated to put into circulation a huge volume of coinage paid out to their armies, which in turn was spent in the regional economies. The financial stress produced by the war and the insatiable demand for currency led both sides (Romans and Carthaginians) to adopt many types of coins, not just their own, to meet their expenses, including at times the coins of their adversaries and local communities acquired as booty or extractions from conquered territories (cf. Crawford 1985: 70–71). This mixing of coinages was exacerbated by mercenary soldiers switching sides in the fight and bringing their accumulated wealth in coins with them to the other side. Such mechanisms would explain why Iberian hoards of this period generally have such a broad mix of coinages, including Carthaginian, Roman, Emporitan and Iberian imitation issues, as well as diverse Greek pieces coming from South Italy, Sicily, Macedonia, Thrace and Asia Minor.

While the influx of many diverse types of coinage undoubtedly increased the potential for using coins in a variety of monetary transactions, the concurrent presence of silver bullion (Hacksilber) in Iberian hoards of this period—and before and after—attest to the continuing importance of this type of private, rather than state-sponsored, monetary instrument and the behavior patterns, e.g., weighing silver in transactions, that its presence implies. Although hoards containing silver fragments, both formless chunks and complete or cut jewelry, were until recently considered to be primarily non-monetary stores of metal for use by silversmiths *vel sim.* (cf. Hébert 1998: 80–84), the monetary role of Hacksilber and other forms of uncoined metal has become more apparent, even in areas, like the archaic and classical-period Aegean and Near East, that saw considerable use of coinage.<sup>29</sup> This hoard, and other Iberian hoards containing Hacksilber, especially

29. See especially Kim and Kroll (2008); Kroll (2008); Balmuth (2001); and van Alfen (2004–05a and b).



those coming from the interior areas, show that by the end of the third century BCE the practice of storing wealth and transacting in weighed silver bullion was widespread (cf. Ripollès 2004: 333–344).

This monetary use of silver bullion did not begin in the Iberian Peninsula during the years of the Second Punic War, but existed previously, as can be deduced from the fact that hoards buried during the fourth century BCE contained noticeable quantities of cut silver, as is the case with the Pont de Molins and Montgó hoards.<sup>30</sup> Initially, during the fifth and fourth centuries BCE, the use and circulation of Hacksilber seems to have been limited primarily to the Mediterranean coastal strip. During the years of the Second Punic War, however, the practice spread further inland as the scale of use also increased.

We do not know if silver bullion was ever used as a primary means of paying mercenaries or distributing booty, that is, if it was ever formally adopted by the warring states as a contingent means of payment in lieu of their own specie, but no matter how it made its way into circulation, the bullion served a function that coinage did not. As this hoard vividly demonstrates, with 81% of all the silver pieces of the hoard weighing between 0.03 and 1.2 g, bullion filled in the lower range of the monetary spectrum where no coin of such small, and apparently needed size existed, or, if they existed, were not in adequate supply to meet demand.

On this point, it is noteworthy that the major peak in the weights of these silver fragments (0.45–0.60 g; Fig. 1) corresponds closely to the weight of one important contemporary fractional coinage, which was issued in significant volume in the north-east and eastern parts of the Iberian Peninsula. These Iberian imitations of Massaliotan and Emporitan fractions, as well as other small silver coinages coming from uncertain mints (Villaronga, 1994, 24/46–49, 56–59/131–158A, 59–60/160–169B, 77–78/1–13), have average weights between *ca.* 0.40 and 0.60 g; smaller fractions have still lower average weights. The high demand for these fractions is seen in their frequent appearance in Second Punic War hoards generally, and in particularly great number in the Villarrubia de los Ojos (Ciudad Real) hoard (García Garrido 1990).<sup>31</sup>

From a monetary standpoint, this new hoard provides evidence not for the general use of monetary Hacksilber in the Iberian Peninsula, which had begun

30. Pont de Molins (*IGCH* 2313; Campo 1987): ingots and Hacksilber weighing *ca.* 2 kg; Montgó: (Chabás 1891: 59–64; *IGCH* 2312): 1 kg in the form of complete or fragmented silver ingots, Hacksilber, as well as 108 g in worked objects.

31. Although the evidence for prices in this period is limited, we get a sense for why there was such a demand for fractional coinage, and corresponding Hacksilber, from two passages in Polybius: the wage of a legionary was two obols per day (= *ca.* 0.75 g of silver; Polybius VI.39.12), while a night's stay at an inn in Galia Cisalpina was a *semis* (= *ca.* 0.19 g of silver; Polybius II.15.6).

centuries earlier, but for a mode of monetization that was both deepening, in terms of the range of transactions accommodated by Hacksilber, and widening, in terms of its geographical expansion, and one that was also exhibiting tremendous flexibility in its concurrent (unregulated?) use of multiple monetary instruments to achieve the same transactional goals.

## APPENDIX 1. CATALOGUE

### I. Coins

Subtotal: 10.28 g.

1. Arse. Drachma.  
*Obv.*: Female head, with Corinthian helmet, to r.  
*Rev.*: Bearded man-faced bull, advancing to r.; above, Iberian legend [𐌔]𐌔𐌔𐌔[𐌕𐌕] ; crescent in front.  
 AR. 2.43 g. Pierced.  
 Ripollès and Llorens (2002): 23a.  
 ANS 2007.1.1
2. Iberian imitation of Emporitan drachma.  
*Obv.*: Wreathed female head r.; three dolphins around (only one visible).  
*Rev.*: Pegasus r.; [head in form of a small crouching figure]; below crescent and Iberian legend [𐌔𐌔𐌔𐌔]𐌕𐌕.  
 AR. 1.0 g. Fragmented: 1/4.  
 Villaronga (1998): 311–330.  
 ANS 2007.1.2
3. Iberian imitation of Emporitan drachma.  
*Obv.*: Wreathed female head r.; three dolphins around (only one visible).  
*Rev.*: Pegasus r.; head in form of a small crouching figure; [below Iberian legend?].  
 AR. 2.50 g. Fragmented: 1/2.  
 ANS 2007.1.3
4. Iberian imitation of Emporitan drachma.  
*Obv.*: [Wreathed] female head r.; [three dolphins around].  
*Rev.*: Pegasus r.; head in form of a small crouching figure; [below Iberian legend?].  
 AR. 1.41 g. Fragmented: 1/4.  
 ANS 2007.1.4
5. Stater of Dyrrachium. 300–200 BCE  
*Obv.*: Cow sucking calf; no circle of dots.  
*Rev.*: Double stellate pattern in square frame.  
 AR. 0.99 g. The design of the stellate pattern has similarities with coins minted before 200 BCE, see SNG Fitzwilliam Museum 2540; SNG Cop. 443–444.  
 ANS 2007.1.5
6. Not identified. Gaulish?  
*Obv.*: Part of a male head?  
*Rev.*: Traces of a non-identified figure.  
 AR. 0.99 g. Fragmented: trapezoidal shape.  
 ANS 2007.1.6
7. Not identified.  
 AR. 0.60 g.  
 ANS 2007.1.7

8. Not identified.

AR. 0.45 g.

ANS 2007.1.8

(*torques*) or a bracelet (*viria*).

Weight: 2.08 g.

ANS 2007.1.13

## II. Jewelry Fragments

Subtotal: 37.22 g

### 9. Chisel-worked sheet fragment

Small fragment of a silver plate chisel-worked *repujada*. Rectangular form, with three concentric circles around a central point, with additional linear elements. The upper portion of the piece is missing, and it appears to have been nailed to some object.

Weight: 0.44 g.

ANS 2007.1.9

### 14. Brooch fragment

Fragment of a tube, the upper portion of which has a rim with a small cord border. Two small balls are welded into one end, three small rings into the other, one longitudinal and two in parallel, a welded band under the rings. This fragment could belong to a bow fibula or brooch of the La Tène-type.

Weight: 1.62 g.

ANS 2007.1.14

### 10. Sheet fragment

Fragment of a silver plate object, dubbed, doubled and folded. Linear elements along one edge, perhaps from a weld.

Weight: 2.15 g.

ANS 2007.1.10

### 15. Bracelet fragment

Fragment of the end of a bracelet with band section finished in the form of a snake head, two semi-globular eyes and other two semi-globular protuberances for nostrils at the end. The edges are raised with a central, chisel-worked spine. The interior face is smooth.

Weight: 0.53 g.

ANS 2007.1.15

### 11. Band fragment

Fragment of a band, folded and twisted into a spiral.

Weight: 1.01 g.

ANS 2007.1.11

### 16. Fibula fragment?

Tubular fragment with a small rod, decorated with a line of dots, welded to one side. The tube appears to have been tapered.

Weight: 1.01 g.

ANS 2007.1.16

### 12. Die-decorated plate fragment

Doubled over plate fragment, one side with U-shaped die-made decorations, the other side smooth.

Weight: 2.05 g.

ANS 2007.1.12

### 17. Chisel-worked plate fragment

Fragment of a rectangular small plate, chisel-worked decoration. The edges are decorated with a series of perpendicular lines, the interior the center of a motif

### 13. Wire fragment

Wire fragment formed by 3 or 4 wires of silver, braided into an S and fused, possibly belonging to the foot of a *fibula*, or an arm/neckring

- perhaps featuring two wolves heads and two aquatic birds. This fragment may be related to no. 9.  
*Weight:* 0.43 g.  
ANS 2007.1.17
18. Decorated rod fragment  
Fragment of a rod with circular cross section, decorated with three spheres made with a chisel or fused, the largest sphere in the center with two smaller on both sides, one of which is decorated with incised lines. It may be a fragment of a high foot of a brooch of La Tène scheme.  
*Weight:* 8.39 g.  
ANS 2007.1.18
19. Plate fragment with circular opening  
Fragment of a plate with a circular perforation reinforced by a rim formed by a welded wire of circular section.  
*Weight:* 0.41 g.  
ANS 2007.1.19
20. Fragment of bar of octagonal cross section  
This fragment may belong to a neckring or to a bracelet.  
*Weight:* 4.35 g.  
ANS 2007.1.20
21. Fragment of bar of square cross section  
*Weight:* 0.57 g.  
ANS 2007.1.21
22. Rod fragment  
Square cross section at one end, circular at the other. It seems to have been slightly twisted.  
*Weight:* 0.17 g.  
ANS 2007.1.22
23. Fragment  
Fragment that seems to have been turned due to mouldings of semicircular section, separated by a larger concave moulding. The piece seems to be slightly twisted.  
*Weight:* 0.55 g.  
ANS 2007.1.23
24. Bracelet fragment  
Fragment of band with lateral rims and a line of chiselled points in the middle; the other face is smooth. It may belong to 15.  
*Weight:* 0.40 g.  
ANS 2007.1.24
25. Bracelet fragment  
Fragment of band with lateral rims; the other face is smooth.  
*Weight:* 0.85 g.  
ANS 2007.1.25
26. Chisel and die-worked plate fragment  
Fragment of plate with thickened edge, below which chisel-worked cord decoration between two fine riders, and a series of die-formed triangles imitating very schematic *ovae*. Likely the edge of a vase with concave-convex profile (cf. Raddatz, 1969, pl. 8,19).  
*Weight:* 0.36 g.  
ANS 2007.1.26
27. Twisted rod or wire fragment  
Possibly part of a torque or neckring made with braided wires.  
*Weight:* 0.95 g.  
ANS 2007.1.27

28. Chisel-worked plate fragment  
Fragment of a small plate with thickened edge, below which chisel-made cord decoration. Possibly part of a chaliciforme vase (cf. Raddatz, 1969, pl. 9, n° 32, 42–47, etc.).  
*Weight:* 0.33 g.  
ANS 2007.1.28
29. Folded band fragment  
Band fragment with lateral rims along which small oblique chisel-cuts. The other face is smooth. Possibly part of a band-bracelet.  
*Weight:* 1.04 g.  
ANS 2007.1.29
30. Small ingot (?) fragment  
Possible test cut in one face  
*Weight:* 1.37 g.  
ANS 2007.1.30
31. Folded band fragment  
Possible band bracelet fragment with well-defined lateral rims. Its inferior face is smooth.  
*Weight:* 1.52 g.  
ANS 2007.1.31
32. Decorated plate fragment  
Fragment of plate with a chiselled decoration forming a line of triangles.  
*Weight:* 1.66 g.  
ANS 2007.1.32
33. Twisted rod fragment  
Fragment of a rod or wire of circular cross section slightly twisted that could be part of a wire neckring of braided wires.  
*Weight:* 1.05 g.  
ANS 2007.1.33
34. Twisted rod fragment  
Fragment of a rod with rectangular cross section that is narrowed or sharpened towards one of the ends. Likely not part of a wire neckring formed by twisted elements.  
*Weight:* 1.55 g.  
ANS 2007.1.34
35. Chiselled band fragment  
Fragment of a silver-tape with its end sharpened as a wire. It is decorated with two lines of chiselled lines of triangles in opposite sense separated by one slight central rime.  
*Weight:* 0.38 g.  
ANS 2007.1.35
- III. Rod Fragments**
- Subtotal: 23.17 g.
36. Fragment of wire with circular cross section  
It is slightly faceted in the middle.  
*Weight:* 1.88 g.  
ANS 2007.1.36
37. Fragment of bar with circular cross section  
Folded and broken in middle. It has copper concretions like no. 41.  
*Weight:* 1.26 g.  
ANS 2007.1.37
38. Fragment of bar with circular cross section  
*Weight:* 1.04 g.  
ANS 2007.1.38
39. Fragment of bar with circular cross section Note size.  
*Weight:* 0.73 g.  
ANS 2007.1.39

40. Fragment of heavy wire with circular cross section  
It is slightly twisted.  
*Weight:* 0.82 g.  
ANS 2007.1.40
41. Fragment of heavy wire with circular cross section  
*Weight:* 0.59 g.  
ANS 2007.1.41
42. Fragment of heavy wire with circular cross section  
*Weight:* 0.93 g.  
ANS 2007.1.42
43. Fragment of wire with circular cross section  
*Weight:* 1.04 g.  
ANS 2007.1.43
44. Fragment of wire with circular cross section  
*Weight:* 1.29 g.  
ANS 2007.1.44
45. Fragment of bar with circular cross section Possible smelting-flashes on one side.  
*Weight:* 1.39 g.  
ANS 2007.1.45
46. Fragment of bar with circular cross section. Note copper concretions as on 42.  
*Weight:* 1.76 g.  
ANS 2007.1.46
47. Fragment of bar with circular cross section  
Note cut marks.  
*Weight:* 1.37 g.  
ANS 2007.1.47
48. Fragment of bar with circular cross section  
Note cut marks.  
*Weight:* 1.87 g.  
ANS 2007.1.48
49. Fragment of bar with circular cross section  
Note that one portion is oval in cross section. *Weight:* 3.85 g.  
ANS 2007.1.49
50. Fragment of bar with circular cross section  
Note cut marks  
*Weight:* 1.36 g.  
ANS 2007.1.50
51. Fragment of bar with hexagonal cross section  
*Weight:* 0.80 g.  
ANS 2007.1.51
52. Fragment of bar with circular cross section  
*Weight:* 1.19 g.  
ANS 2007.1.52
- IV. Hacksilber**
- Subtotal: 29.44 g
53. Cut ingot fragment  
*Weight:* 1.52 g.  
ANS 2007.1.53
54. Cut ingot fragment  
Note copper concretions.  
*Weight:* 1.13 g.  
ANS 2007.1.54
55. Cut ingot fragment  
*Weight:* 0.83 g.  
ANS 2007.1.55

- |   |   |
|---|---|
| <p>56. Cut ingot fragment<br/>Flattened (slightly thicker than foil).<br/><i>Weight:</i> 0.57 g.<br/>ANS 2007.1.56</p> <p>57. Cut ingot fragment<br/>Note flashes.<br/><i>Weight:</i> 2.55 g.<br/>ANS 2007.1.57</p> <p>58. Cut ingot fragment<br/><i>Weight:</i> 1.66 g.<br/>ANS 2007.1.58</p> <p>59. Cut ingot fragment<br/>Flattened (slightly thicker than foil).<br/><i>Weight:</i> 0.75 g.<br/>ANS 2007.1.59</p> <p>60. Cut ingot fragment<br/>Note flashes.<br/><i>Weight:</i> 0.46 g.<br/>ANS 2007.1.60</p> <p>61. Cut ingot fragment<br/>Note cut marks.<br/><i>Weight:</i> 0.59 g.<br/>ANS 2007.1.61</p> <p>62. Cut ingot fragment<br/><i>Weight:</i> 0.52 g.<br/>ANS 2007.1.62</p> <p>63. Cut ingot fragment<br/><i>Weight:</i> 0.50 g.<br/>ANS 2007.1.63</p> <p>64. Cut ingot fragment<br/>Possibly a coin fragment.<br/><i>Weight:</i> 1.19 g.<br/>ANS 2007.1.64</p> <p>65. Cut ingot fragment<br/><i>Weight:</i> 0.45 g.<br/>ANS 2007.1.65</p> | <p>66. Cut ingot fragment<br/><i>Weight:</i> 2.52 g.<br/>ANS 2007.1.66</p> <p>67. Cut ingot fragment<br/>Note copper concretions.<br/><i>Weight:</i> 0.65 g.<br/>ANS 2007.1.67</p> <p>68. Cut ingot fragment<br/><i>Weight:</i> 0.72 g.<br/>ANS 2007.1.68</p> <p>69. Ingot fragment or drop of silver<br/>smelting<br/>Note copper concretions.<br/><i>Weight:</i> 0.56 g.<br/>ANS 2007.1.69</p> <p>70. Cut ingot fragment<br/><i>Weight:</i> 0.78 g.<br/>ANS 2007.1.70</p> <p>71. Ingot fragment or drop of<br/>silver smelting<br/><i>Weight:</i> 0.81 g.<br/>ANS 2007.1.71</p> <p>72. Ingot fragment or drop of<br/>silver smelting<br/><i>Weight:</i> 1.09 g.<br/>ANS 2007.1.72</p> <p>73. Cut ingot fragment<br/><i>Weight:</i> 1.10 g.<br/>ANS 2007.1.73</p> <p>74. Ingot fragment or drop of<br/>silver smelting<br/><i>Weight:</i> 1.99 g.<br/>ANS 2007.1.74</p> <p>75. Cut ingot fragment<br/><i>Weight:</i> 1.19 g.<br/>ANS 2007.1.75</p> |
|---|---|

- |   |  |
|---|--|
| <p>76. Cut ingot fragment<br/>Flattened.<br/><i>Weight:</i> 0.46 g.<br/>ANS 2007.1.76</p> <p>77. Ingot fragment or drop of<br/>silver smelting<br/>Flattened oval form<br/><i>Weight:</i> 0.52 g.</p> <p>78. Cut ingot fragment<br/>Note copper concretions.<br/><i>Weight:</i> 1.03 g.<br/>ANS 2007.1.78</p> <p>79. Cut ingot fragment<br/><i>Weight:</i> 0.56 g.<br/>ANS 2007.1.79</p> <p>80. Ingot fragment or drop<br/>of silver smelting<br/><i>Weight:</i> 0.49 g.<br/>ANS 2007.1.80</p> <p>81. Cut ingot fragment<br/><i>Weight:</i> 0.99 g.<br/>ANS 2007.1.81</p> <p>82. Cut ingot fragment<br/>One edge beveled.<br/><i>Weight:</i> 0.39 g.<br/>ANS 2007.1.82</p> <p>83. Cut ingot fragment<br/>One edge beveled.<br/><i>Weight:</i> 0.87 g.<br/>ANS 2007.1.83</p> <p><b>V. Foil</b></p> <p>Subtotal: 26.51 g.</p> <p>84. Plate fragment<br/>Folded and crumpled.<br/><i>Weight:</i> 1.18 g.<br/>ANS 2007.1.84</p> | <p>85. Plate fragment<br/>Folded and crumpled.<br/><i>Weight:</i> 0.85 g.<br/>ANS 2007.1.85</p> <p>86. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.27 g.<br/>ANS 2007.1.86</p> <p>87. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.36 g.<br/>ANS 2007.1.87</p> <p>88. Plate or band fragment<br/>Possibly a bracelet fragment?<br/><i>Weight:</i> 0.17 g.<br/>ANS 2007.1.88</p> <p>89. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.20 g.<br/>ANS 2007.1.89</p> <p>90. Plate or band fragment<br/>Folded.<br/><i>Weight:</i> 0.64 g.<br/>ANS 2007.1.90</p> <p>91. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.06 g.<br/>ANS 2007.1.91</p> <p>92. Plate fragment<br/>Folded and crumpled.<br/><i>Weight:</i> 0.44 g.<br/>ANS 2007.1.92</p> <p>93. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.13 g.<br/>ANS 2007.1.93</p> |
|---|--|



- |   |   |
|---|---|
| <p>94. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.50 g.<br/>ANS 2007.1.94</p> <p>95. Plate fragment<br/>Rolled or coiled, one edge cut.<br/><i>Weight:</i> 1.07 g.<br/>ANS 2007.1.95</p> <p>96. Plate fragment<br/>Rolled or coiled, small spot<br/>of copper corrosion.<br/><i>Weight:</i> 0.75 g.<br/>ANS 2007.1.96</p> <p>97. Plate fragment<br/>Folded band with copper corrosion.<br/><i>Weight:</i> 0.78 g.<br/>ANS 2007.1.97</p> <p>98. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.60 g.<br/>ANS 2007.1.98</p> <p>99. Plate (or ingot?) fragment<br/>Note cut marks.<br/><i>Weight:</i> 0.51 g.<br/>ANS 2007.1.99</p> <p>100. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.07 g.<br/>ANS 2007.1.100</p> <p>101. Plate fragment<br/>Folded.<br/><i>Weight:</i> 1.02 g.<br/>ANS 2007.1.101</p> <p>102. Plate fragment<br/>Crumpled with copper<br/>concretions.<br/><i>Weight:</i> 0.42 g.<br/>ANS 2007.1.102</p> | <p>103. Plate fragment<br/><i>Weight:</i> 0.18 g.<br/>ANS 2007.1.103</p> <p>104. Plate fragment<br/><i>Weight:</i> 0.23 g.<br/>ANS 2007.1.104</p> <p>105. Plate (or ingot?) fragment<br/>Note cut marks.<br/><i>Weight:</i> 0.47 g.<br/>ANS 2007.1.105</p> <p>106. Plate fragment<br/>Folded; note raised decoration.<br/><i>Weight:</i> 0.10 g.<br/>ANS 2007.1.106</p> <p>107. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.26 g.<br/>ANS 2007.1.107</p> <p>108. Plate fragment<br/>Folded with a wire passing<br/>through a perforation.<br/><i>Weight:</i> 0.54 g.<br/>ANS 2007.1.107</p> <p>109. Band fragment<br/>Folded and coiled.<br/><i>Weight:</i> 0.08 g.<br/>ANS 2007.1.109</p> <p>110. Plate fragment<br/>Crumpled.<br/><i>Weight:</i> 0.79 g.<br/>ANS 2007.1.110</p> <p>111. Plate fragment<br/>Crumpled with small<br/>amount of copper concretion.<br/><i>Weight:</i> 0.57 g.<br/>ANS 2007.1.111</p> |
|---|---|

- |   |  |
|---|--|
| <p>112. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.76 g.<br/>ANS 2007.1.112</p> <p>113. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.65 g.<br/>ANS 2007.1.113</p> <p>114. Plate fragment<br/>Coiled with a small amount<br/>of copper concretion.<br/><i>Weight:</i> 1.20 g.<br/>ANS 2007.1.114</p> <p>115. Plate fragment<br/>Fragmented by folding,<br/>not cutting<br/><i>Weight:</i> 0.32 g.<br/>ANS 2007.1.115</p> <p>116. Plate (or ingot?) fragment<br/>Note cut marks.<br/><i>Weight:</i> 0.58 g.<br/>ANS 2007.1.116</p> <p>117. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.31 g.<br/>ANS 2007.1.117</p> <p>118. Plate (or ingot?) fragment<br/>Note cut marks.<br/><i>Weight:</i> 0.73 g.<br/>ANS 2007.1.118</p> <p>119. Plate fragment<br/>Folded and flattened.<br/><i>Weight:</i> 0.97 g.<br/>ANS 2007.1.119</p> <p>120. Plate fragment<br/>Folded and crumpled.<br/><i>Weight:</i> 0.50 g.<br/>ANS 2007.1.120</p> | <p>121. Plate fragment<br/><i>Weight:</i> 0.31 g.<br/>ANS 2007.1.121</p> <p>122. Plate fragment<br/><i>Weight:</i> 0.28 g.<br/>ANS 2007.1.122</p> <p>123. Plate fragment<br/>Folded and flattened.<br/><i>Weight:</i> 0.03 g.<br/>ANS 2007.1.123</p> <p>124. Plate fragment<br/>Folded and flattened.<br/><i>Weight:</i> 0.21 g.<br/>ANS 2007.1.124</p> <p>125. Plate fragment<br/>Folded.<br/><i>Weight:</i> 0.21 g.<br/>ANS 2007.1.125</p> <p>126. Plate fragment<br/><i>Weight:</i> 0.39 g.<br/>ANS 2007.1.126</p> <p>127. Band fragment?<br/><i>Weight:</i> 0.48 g.<br/>ANS 2007.1.127</p> <p>128. Worked plate fragment<br/>Decoration of raised perpendicular<br/>lines near one edge. Cf. no. 9,<br/>perhaps part of the same object.<br/>Crumpled.<br/><i>Weight:</i> 0.12 g.<br/>ANS 2007.1.128</p> <p>129. Plate fragment<br/>Note copper concretions.<br/><i>Weight:</i> 0.63 g.<br/>ANS 2007.1.129</p> |
|---|--|

- |  |   |
|--|---|
| <p>130. Plate fragment<br/>Note copper concretions.<br/>Weight: 0.36 g.<br/>ANS 2007.1.130</p>                       | <p>134. Plate fragment<br/>Folded.<br/>Weight: 0.95 g.<br/>ANS 2007.1.134</p> |
| <p>131. Band fragment<br/>Folded and unfolded<br/>with copper concretion.<br/>Weight: 1.38 g.<br/>ANS 2007.1.131</p> | <p>135. Plate fragment<br/>Weight: 0.36 g.<br/>ANS 2007.1.135</p>             |
| <p>132. Plate (or ingot?) fragment<br/>Weight: 0.84 g.<br/>ANS 2007.1.132</p>  | <p>136. Plate or band fragment<br/>Weight: 0.26 g.<br/>ANS 2007.1.136</p>     |
| <p>133. Plate fragment<br/>Folded, edges curled, perforated.<br/>Weight: 0.44 g.<br/>ANS 2007.1.133</p>              |   |

## REFERENCES

- Almagro Basch, M., and M. Almagro-Gorbea. 1964. El Tesorillo de Valeria. *Numisma* 14, 71: 25–47.
- Almagro-Gorbea, M. 1977. *El Bronce Final y el Período Orientalizante en Extremadura*. Madrid: Biblioteca Praehistorica Hispana 14.
- Arévalo, A. 2002. La moneda griega foránea en la Península Ibérica. *Actas del X Congreso Nacional de Numismática, Albacete 1998*. Madrid: 1–15.
- Argente, J. L. 1994. *Las fibulas de la Meseta Oriental*. Madrid: Excavaciones Arqueológicas en España 168.
- Balmuth, M., ed. 2001. *Hacksilber to coinage: new insights into the monetary history of the Near East and Greece*. Numismatic Studies 24. New York: American Numismatic Society.
- Bandera, M<sup>a</sup>. L. de la. 1996. Objetos de plata que acompañan a las tesorizaciones. In *Los tesoros en el Sur de Hispania*, F. Chaves, ed., pp. 601–694. Sevilla.
- Berrocal Rangel, L. 1989. Placas áureas de la Edad del Hierro en la Meseta Occidental. *Trabajos de Prehistoria* 46: 279–291.
- Campo, M. 1987. Las monedas de los tesoros de Pont de Molins, Tarragona y Rosas del Gabinet Numismàtic de Barcelona (s.IV a.C.). In *Studi per Laura Breglia I*. *Boll. Num. supp.* 4, pp. 139–160.
- Chabás, R. 1891. Tesoro griego del Mongó. *El Archivo* 5 (1): 59–64.

- Crawford, M. H. 1985. *Coinage and money under the Roman Republic: Italy and the Mediterranean economy*. London: Methuen.
- Delibes de Castro, G., A. Esparza Arroyo, R. Martín Valls, and C. Sanz Mínguez. 1993. Tesoros celtibéricos de Padilla de Duero. In *Arqueología vaccea. Estudios sobre el mundo prerromano en la cuenca media del Duero*, F. Romero Carnicero, C. Sanz Mínguez and Z. Escudero Navarro, eds., pp. 397–470. Valladolid.
- Fernández Chicarro, C. 1944. El tesoro de la Cuesta del Rosario, de Sevilla. *Numario Hispánico* 1: 63–70.
- Fernández Gómez, F. 1979. Un tesorillo de plata en el castro de El Raso de Candelada (Ávila). *Trabajos de Prehistoria* 36: 379–406.
- . 1985. El tesorillo turdetano de Mairena del Alcor. *Trabajos de Prehistoria* 42: 149–194.
- . 1986. *Excavaciones arqueológicas en El Raso de Cadeleda (Ávila)*, I–II. Ávila.
- . 1989. Orfebrería indígena en época prerromana. In: *El oro en la España prerromana*. *Revista de Arqueología, Extra*, pp. 82–89. Madrid.
- Galán, E. and M. Ruiz-Gálvez. 1996. Divisa, dinero y moneda. Aproximación a los patrones petrológicos prehistóricos peninsulares. *Complutum Extra* 6,2: 151–165.
- García Garrido, M. 1990. El hallazgo de Villarrubia de los Ojos. *Acta Numismática* 20: 37–78.
- García-Bellido, M. P. 1990a. Sistemas metrológicos, monedas y desarrollo económico. In *Zaragoza IV Simposio sobre los Celtíberos. Economía*, F. Burillo, ed., pp. 363–385.
- . 1990b. *El tesoro de Mogente y su entorno monetario*. Valencia: Estudis Numismàtics Valencians.
- Gitler, H. 2006. A Hacksilber and cut Athenian tetradrachm hoard from the environs of Samaria: late fourth century BCE. *Israel Numismatic Research* 1: 5–14.
- Hébert, J.-C. 1998. La datation haute des monnaies aux types de Béziers, Mousan et Bridiers, d'après les monnaies de ces types trouvées dans quatre trésors espagnols. *Acta Numismática* 28: 79–126.
- Hildebrandt, G. 1993. Münzen als Hacksilber in Schatzfunde von der Iberischer Halbinsel. *Madriider Mitteilungen* 44: 161–189.
- IGCH = Thompson, M., O. Morkholm, C. M. Kraay. 1973. *An inventory of Greek coin hoards*. New York: American Numismatic Society.
- Kim, H. and J. Kroll. 2008. A hoard of archaic coins of Colophon and unminted silver. *American Journal of Numismatics* 20: 53–103.
- Kroll, J. 2008. The monetary use of weighed bullion in archaic Greece. In *The monetary systems of the Greeks and Romans*, W. V. Harris, ed., pp. 12–37. Oxford: Oxford University Press.

- Lenerz-de Wilde, M. 1991. *Iberia Celtica. Archäologische Zeugnisse keltischer Kultur auf der Pyrenäenhalbinsel*. Stuttgart.
- Lorrio, A. J. 1997. Elementos para la delimitación de la Celtiberia Meridional. In *Actas del VII Coloquio sobre Lenguas y Culturas Paleohispánicas* (Zaragoza, 1997), F. Villar and F. Beltrán, eds., pp. 257–68. Zaragoza.
- , ed. 2001a. *Los íberos en la comarca de Requena-Utiel* (Valencia). Alicante.
- . 2001b. La Arqueología Ibérica en Requena-Utiel: Análisis historiográfico. In *Los íberos en la comarca de Requena-Utiel* (Valencia), A. J. Lorrio, ed., pp. 15–31. Alicante.
- Marchetti, P. 1978. *Histoire économique et monétaire de la deuxième Guerre Punique*. Brussels: Académie Royale de Belgique.
- Martínez, García, J. M. 1986. Un brazalete de plata del poblado ibérico de Los Villares. Caudete de las Fuentes (Valencia). *Trabajos de Prehistoria* 43: 257–266.
- Mélida, J. R. 1902. Antigüedades ante-romanas de la costa de Levante. *Revista de Archivos, Bibliotecas y Museos*, 3ª época, 7: 164–174.
- Pla Ballester, E. 1962. Nota preliminar sobre “Los Villares” Caudete de las Fuentes-Valencia. *VII Congreso Nacional de Arqueología. Barcelona. 1960*, pp. 233–39. Zaragoza.
- Raddatz, K. 1969. *Die Schatzfunde der iberischen Halbinsel vom Ende des Dritten bis zur Mitte des Ersten Jahrhunderts vor Chr.* Berlin : Madrider Forschungen 5.
- Ripollès, P. P. 1980. El tesoro de ‘La Plana de Utiel’. *Acta Numismática* 10: 15–25.
- . 2004. Las primeras acuñaciones griegas e ibéricas de la Península Ibérica: formalización del uso de la plata a peso. Emporion y Arse. In *Moneta Qua Scripta. La moneda como soporte de escritura*, F. Chaves and F. J. García Fernández, eds. *Actas del III Encuentro Peninsular de Numismática Antigua*, Sevilla: Anejos AEA 33: 333–344.
- . 2005. El tesoro d’Orpesa la Vella (Orpesa, Castelló). *Acta Numismática* 35: 15–34.
- Ripollès, P. P., G. Cores, and M. Gozalbes. (forthcoming). El tesoro de Cuenca-Guadalajara. Parte I: las monedas. *Actas del XIII Congreso Nacional de Numismática*, Cádiz, 2007. Cádiz-Madrid.
- Ripollès, P. P., and M. M. Llorens. 2002. *Arse-Saguntum: historia monetaria de la ciudad y su territorio*, Sagunto: Bancaja.
- Ripollès, P. P., and A. Ribera. 2005. El tesoro de Cheste. In *Tesoros monetarios de Valencia y su entorno*, A. Ribera and P. P. Ripollès, eds., pp. 19–33. Valencia.
- San Valero, J. 1945. *El tesoro preimperial de plata de Driebes* (Guadalajara). Madrid: Informes y Memorias de la Comisaría General de excavaciones Arqueológicas 9.
- Sills, J. 2003. *Gaulish and early British gold coinage*. London: Spink.
- van Alfen, P. G. 2004–2005a. A new Athenian “owl” and bullion hoard from the Near East. *American Journal of Numismatics* 16–17: 47–61.

- . 2004–2005b. Herodotus' "Aryandic" silver and bullion use in Persian-period Egypt. *American Journal of Numismatics* 16–17: 7–46.
- Villaronga, L. 1967. *Las monedas de Arse Saguntum*. Barcelona: Asociación Numismática Española.
- . 1973. *Las monedas Hispano-cartaginesas*. Barcelona: Asociación Numismática Española.
- . 1984. Uso de la ceca de Emporion por los romanos para cubrir sus necesidades financieras en la Península Ibérica durante la segunda guerra púnica. In *Studi per L. Breglia I, Boll. Num. supp.* 4, pp. 209–214.
- . 1993. *Tresors monetaris de la Península Ibèrica anteriors a August: repertori i anàlisi*. Barcelona: Asociación Numismática Española and Societat Catalana d'Estudis Numismàtics.
- . 1994. *Corpus Nummum Hispaniae ante Augusti Aetatem*. Madrid: Herrero.
- . 1998. *Les dracmes ibèriques i llurs divisors*. Barcelona: Societat Catalana d'Estudis Numismàtics.
- . 2003. *La plata emporitana de la Segona Guerra Púnica, final del segle III a.C.* Barcelona: Societat Catalana d'Estudis Numismàtics.
- Zóbel de Zangróniz, J., 1878. *Estudio histórico de la moneda antigua española*. Sevilla: Memorial histórico español 4.



## The Bronze Coinage of Tyre: The First Years of Autonomy

PLATES 69–70

DANNY SYON\*\*\*

The excavations at Gamla yielded several hundred small bronze coins of Tyre, minted in the first decades following the city's autonomy in 125 BCE. The study of these mostly unpublished coins casts light on the mint in this transitional period. Coins of four different types are dated "year 1," and another, showing Melqart and a palm tree, is dated from year 3 to 28. This latter type is probably often confused by numismatists with the similar Seleucid issues of the city. A checklist is provided for identifying and differentiating the coins with this civic type from the Seleucid coins.

### INTRODUCTION

To date, Hill's monumental volume of *BMC Phoenicia* remains practically the only reference work for the coinage of Tyre. Tyre is possibly one of the most prolific mints of antiquity, and it is certainly the most important in the southern Levant from the middle of the fourth century BCE to the end of city coinages under Gallienus. Though new coin types of the city are identified with some regularity (mainly colonial types from the third century CE), the preparation of a new corpus has remained a daunting task that no numismatist seems to want to undertake. The present article examines a short period of some thirty years in the mint's history in the Hellenistic period through some unpublished coins found in the excavations at Gamla.

\* This article is a reworking of a section from my doctoral dissertation (Syon 2004, 69–75). Israel Antiquities Authority, P. O. Box 1094, Akko 24110, Israel.

\*\* I am grateful to Oliver D. Hoover for commenting on an earlier draft of this paper. All mistakes and omissions remain, of course, mine alone.



The town of Gamla, situated on the Golan, was excavated by the late Shmarya Gutmann over fourteen seasons, and later by myself and my associate Zvi Yavor.<sup>1</sup> The excavations uncovered a Jewish city of the Second Temple period, which fell to the Romans in 67 CE, during the Jewish War, as recounted by the historian Flavius Josephus (*The Jewish War* 4.1–83). Since the site was not inhabited after that date, the town provides an unprecedented glimpse into Jewish life of the first centuries BCE and CE, as well as to a Roman battlefield that was left undisturbed.

About 6,300 coins were recovered in the excavations (Syon 2004, forthcoming), of which no fewer than 1,287 were minted at Tyre. Except one silver coin of the fourth century BCE and three Ptolemaic bronze coins, these include 527 Seleucid coins and 756 autonomous issues minted in or after 125 BCE, the year when Demetrius II was murdered in Tyre and the city declared its autonomy. The autonomous issues found at Gamla include forty-six silver sheqels and half-sheqels (equivalent to tetradrachms and didrachms respectively), and the rest are bronze coins.

The bronze coins can be further separated: 625 coins are dated to the twenty-eight years between 125 and 99/8 BCE, and only twenty-six coins to the nearly 170-year-long period between 99/8 BCE and 67 CE, when Gamla was captured by the Romans and then abandoned. An additional fifty-nine coins cannot be dated precisely. This large number of coins provides a glimpse into the workings of the Tyrian mint during its transition from a royal Seleucid mint to an autonomous mint. The autonomous mint of Tyre set the tone in autonomous silver coinage for the southern Levant for almost two hundred years (125 BCE–66 CE). Tyre's autonomous bronze coinage continued for over three hundred years, until it was replaced by Roman-style provincial coinage at the end of the second century CE, and eventually by colonial coinage. Tyre thus minted autonomous coins far longer than any other city.

## THE COINS

The first twenty-five or so years of autonomy at Tyre are characterized by much experimentation with the bronze coinage, in which various ephemeral types were introduced and discontinued.<sup>2</sup> Ultimately, the mint settled on some fairly rigid obverse/reverse combinations. Initially, the obverses carried the heads of either Tyche or Melqart, even on what appear to be similar denominations, which may have been confusing to the user. Some Seleucid reverse types were continued, later

1. The final publication of Gamla is in progress: volume 1 appeared in 2006 (Berlin 2006). An overview of the site is in *NEAEHL* 2: 459–463, Syon 1992 and 2002.

2. In what follows, square brackets [] denote the catalog number as it will appear in Syon (forthcoming), which is the final publication of all the coins found at Gamla.

to be dropped in favor of the ubiquitous head of Tyche/galley and head of Tyche/palm types. The head of Melqart reappeared on the bronzes in the second half of the first century BCE on the Melqart/club types (*BMC Phoenicia*, 257–258), not one of which were found at Gamla. The placement of the Tyrian monogram and the date also underwent some changes, and in these formative years they can be found on either the right or the left side, or sometimes both on the same side.

### The Tyche Coins

No bronze coins have yet been published for the very first years of autonomy. At Gamla, there are four small bronze denominations struck in this period.

1. *Obv.* Head of Tyche r., veiled, wearing turreted crown; dotted border.  
*Rev.* Stylized ram to l.; behind: palm branch; in upper l. field: ⲭ; on r., date: LA (126/5 BCE); below: ⲁⲣⲓ ⲕ (?) ; dotted border.<sup>3</sup>  
 One specimen, 10 mm, 1.35 g [1275].

This coin is a direct continuation of a similar Seleucid type of Tyre first appearing under Antiochus VII (SC 2, no. 2114) and later in the last years of Demetrius II. The last one is dated 127/6 BCE (SC 2, no. 2198). Another small coin, designated as “Unattributed Issue of Southern Coele Syria” (SC 2, no. 2207) and dated tentatively to the second reign of Demetrius II, has an obverse that carries an extraordinarily similar ram. Tentatively, this coin is attributed to Tyre because of the abundance of Tyrian coins found in Israel.<sup>4</sup>

The type on the reverse of this coin is almost invariably described as “prow,” “spur,” or “forepart” of galley on both Seleucid and Autonomous coinage. While most prows do incorporate a bronze ram (cf., e.g., *BMC Phoenicia*, 55, nos. 23–25 [Berytus]; SC 2, no. 2257 [Alexander Balas], no. 2328 [Antiochus IX]), the type of this coin is actually a ram on its own.<sup>5</sup> The nature of the depicted object has now been clarified by the find of an actual bronze ram off ‘Atlit (see Pl. 69, 4; Casson and Steffy 1991). Similarly, the object on which the eagle stands on the reverse of Tyrian silver coinage of Phoenician weight—whether struck for the Seleucid or autonomous issues—is also clearly a stylized ram rather than a ship’s prow (e.g., *BMC Phoenicia*, pl. 29, no. 19).<sup>6</sup> It is possible that earlier authors who used the

3. The only other specimen known to me, from another die, is in the Haifa Municipal Museum, inv. no. 1330 (Information courtesy of the museum). It is possible that a similar coin is referred to by Seyrig from the excavations at Oumm el-Amed, but unfortunately there is no photograph to compare to (Seyrig 1962, no. 35).

4. I am grateful to Oliver Hoover for discussing this possibility with me.

5. For a number of rams mistaken for prows, cf., e.g., SC 2, nos. 2069, 2207.

6. On Sidonian silver, a ram appears on autonomous issues but not on the Seleucid issues (e.g., *BMC Phoenicia*, pl. 21, no. 15).

word “spur” had a ram in mind. In the new volume of Seleucid coins (SC 2), this is now corrected.

2. *Obv.* Head of Tyche r., veiled, wearing turreted crown; dotted border.  
*Rev.* Stylized palm tree; on l.: ☿; on r., date, mostly obliterated; dotted border. The dates noted are A and Δ? (126/5 and 123/3 BCE).  
 Eleven specimens, 9–12 mm, 0.53–2.00 g [1359–1360; 1366–1368; 1370; 1372–1374; 1379–1380].

The stylized palm tree complements the stylized ram and forms a smaller denomination of the same series. Incidentally, coins nos. 1 and 2 also prove that Tyche appears veiled on coins earlier than 111 BCE (e.g., Hill in *BMC Phoenicia*, liii).<sup>7</sup>

3. *Obv.* Head of Tyche r., wearing turreted crown; dotted border.  
*Rev.* Stylized galley’s prow l.; above: ☿; date LA (?); below, ♀; circle border.  
 One specimen, 12 mm, 1.86 g [1276].

Although the reading of the date is uncertain, coin no. 3 surely belongs to this series because of its similarity of stylized design, the monogram, and inscription.

All three denominations carry a Tyche obverse, a rather unusual phenomenon for civic bronze coins circulating simultaneously during a very short period. Apparently, in the very first years Melqart was reserved for the silver coinage only, and all bronzes carried a Tyche obverse. Beginning in year 3 (124/3 BCE), the head of Melqart was introduced for the bronze. For a few years (years 3–11), both Tyche and Melqart appeared on small denominations with a palm tree reverse, and from then on, until year 28, the portrait of Melqart was reserved for this denomination, and the Tyche/Palm type was a larger denomination. The ram and prow apparently disappeared entirely.

#### The Melqart/palm tree coins [1391–1983]

The majority of Seleucid issues found at Gamla are the ubiquitous small bronzes showing on the obverse the head of the king and on the reverse a palm tree (see SC 2, for every king from Antiochus IV onward). This type was carried over by the autonomous mint of Tyre. The main change was the replacement of the head of the Seleucid king on the obverse with that of Melqart, removing the reverse inscription naming the king, and adding the monogram of Tyre.

It is remarkable how few specimens of the Melqart/palm tree have been published, given that at Gamla there are close to two hundred clearly dated coins of

7. The history of the veil as a chronological indicator is discussed at length by Sawaya (forthcoming).

this type and nearly four hundred worn specimens with illegible dates that are unquestionably of the same type and probably of the same date range.

One specimen in the British Museum (*BMC Phoenicia*, 254, no. 251) is dated “year 28,” and the only other site where coins of this date have been published is, as far as I am aware, Dura Europos, where twenty-six specimens of “year 28” were recovered (Bellinger 1949, 201, nos. 1881–1881a). A further twenty-five coins of “year 28” were found in a hoard on the Golan (*IGCH* 1613; Seyrig 1958, 175–176). I have identified a further fifteen specimens in local collections from sites in Galilee during the assembling of the data for my doctoral dissertation: Hagoshrim (5 coins), Sasa (1 coin, year 15), Gush Halav (1 coin, year 15), Shihin (Asochis; 7 coins), Sha’ar Ha-’Amaqim (1 coin).



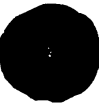






These autonomous coins can easily be confused with the Seleucid coins of the same type, because both types have a beveled edge, are usually found in a poor state of preservation, and the autonomous issues lack published examples for comparison. After I gained some experience identifying these coins and reexamined the group of coins from Shihin (from the Degani collection), I was able to identify twenty-nine such coins. The obverse portraits are often off flan, suggesting mass production, unlike other Tyrian coins, which are carefully centered. The portrait is not always the “typical” chubby Melqart head but rather often uncannily resembles some Seleucid monarchs. Among the coins from Gamla, I was able to “identify” portraits of the young Demetrius II and Antiochus VII (Pl. 70, 5a, 5b, 5c, 5d) and a coin from Shihin bearing a portrait that may be a caricature of Alexander Balas (Pl. 70, 5a). The coin listed under no. 1551 in *SNG Israel* 1 as an issue of Alexander Balas, with his characteristic profile, is most likely an autonomous issue as well. One explanation for this resemblance might be the use of obsolete Seleucid obverse dies, perhaps with some tooling. Another explanation might be the fact that some or all the engravers continued working from the Seleucid into the autonomous era, continuing in the same style. In this case, however, a resemblance to Demetrius II would mostly be expected. Yet a third possible explanation is that the dies for these tiny coins were cut by apprentices who had before them as a model some older coins produced by the mint.

These autonomous bronzes were apparently minted in large quantities, but for a limited time only between c. 124–98 BCE. The earliest date observed for these with some certainty is “year 3” (124/3 BCE) and the latest “Year 28” (99/8 BCE). Many specimens are crude and undated, and their attribution as autonomous rests on the observation that they carry no legends. All the “no monogram / no legend” specimens are of the crude variety (Table 1).

The copious issue of years 14 and 15 (113/2 and 112/1 BCE) may possibly be associated with the activities of Antiochus VIII and IX, the rival contenders to the Seleucid throne. Their fortunes during these years changed constantly and involved much military movement close to Tyre. Tyre might have wanted to assert its autonomy by minting a large issue precisely at this time, or perhaps it endeavored to profit from the warring factions. Admittedly, sources for such a connection are lacking. It is noteworthy that relatively few other bronze issues are known in the same period anywhere in the southern Levant, so these Tyrian issues circulated widely as small change.

Table 1. Dates on Melqart/palm tree coins from Gamla

Year	Date	Variants	Quantity	
			Certain	Uncertain
3	124/3	Γ, L-Γ	1	3
4	123/2	Δ, L-Δ	1	3
7	120/19	L-Z		1
8	119/8	H, L-H, LH	6	2
9	118/7	Θ	1	
10	117/6	I, L-I	1	1
11	116/5	A-I, AI	3	
12	115/4	LIB?		1
14	113/2	Υ - ΛΔI [L] - ΔI I, LIΔ	107	6
15	112/1	Υ - EI Υ - IE LEI	43	1










Year	Date	Variants	Quantity	
			Certain	Uncertain
16	111/0	𐤌 - L<I		1
18	109/8	𐤌 - HI, L-HI	 	5
28	99/8	HK - 𐤌	 	6
		𐤌 - no date	 	5
		No date or monogram	 	10

The significance of the different styles cannot be determined at this time. If style is chronologically significant, then it is likely that the well-executed coins were the first issues, and the crude issues with no monogram or date were last. These latter were apparently produced to supply a demand in a period when hardly any other authority in the region minted small change. Although it cannot be ruled out that these are unofficial imitations,<sup>8</sup> the fact that in size and weight range, fabric, and flan they are identical to the coins that bear both date and monogram suggests that they are genuine products of the mint of Tyre.

A checklist (Table 2) will help classify and separate the Seleucid and autonomous coins, based on fragmentary details. The large quantity of them at Gamla—1,096 altogether (502 Seleucid and 594 autonomous)—allowed in most cases for a firm attribution when at least some detail was visible, yet many coins were only tentatively assigned to either group.

8. I thank one of the reviewers of the manuscript for this suggestion.

Table 2. Checklist of Seleucid and autonomous "palm tree" coins of Tyre

Feature	On Seleucid Coins	On Autonomous Coins
Obverse portrait	Head of the Seleucid king 	Head of Melqart 
	For some kings, the features are recognizable even if the coin is partly worn, e.g., Antiochus IV, Balas, and Demetrius II.	Usually it is the characteristic chubby face seen on the larger denominations and the silver sheqels, but sometimes it can be confused with a Seleucid king.
Reverse inscription	ΒΑΣΙΛΕΥΣ + Name in gen. 	No inscription around the circumference.
	Always present. Traces of a circular inscription are a sufficient criterion for attribution as Seleucid.	When other details are obliterated but it can be determined that there is no circular inscription, this is a sufficient criterion for attribution as autonomous.
Date	Present on all issues after Antiochus IV. Not introduced by L, except under Demetrius I. Usually split by palm tree. Date range: ΕΛΡ-ΖΠΡ (SE 135-187). P always present—its presence is sufficient for attribution as Seleucid.	Mostly on the right side of the palm tree, but sometimes split. Mostly introduced by L. Date range recorded: Γ-HK (3-28; 124/3-99/8 BCE)
Monogram of Tyre ✕	Never. In the Seleucid period, the monogram only appears on some larger bronzes in the second reign of Demetrius II (129-125 BCE).	On most issues. Traces of it are a sufficient criterion for attribution as autonomous.
Hole centering	 On some issues, down to the first reign of Demetrius II (145-138 BCE). Presence of hole centering is sufficient for attribution as Seleucid.	Never.
Size	Usually larger (13-15 mm) before Demetrius II.	Small (10-13 mm).
	The style of the palm tree is usually not a good criterion, except for some very distinct types, as in the photographs:  	  

## PHOTO CREDITS

Pls. 69–70, nos. 2, 3, 5b, 5d, photographed by Clara Amit, Israel Antiquities Authority

## SOURCES OF COINS

1. Gamla excavations, IAA 17520
2. Gamla excavations, IAA 21040
3. Gamla excavations, IAA 18910
- 5a. Site of Shihin, A. Degani collection
- 5b. Gamla excavations, IAA 21109
- 5c. Gamla excavations, IAA 17539
- 5d. Gamla excavations, IAA 20748

## KEY TO PLATES 69–70

- Figure 1. Coin 1: “Year 1”: ram.  
 Figure 2. Coin 2: Stylized palm tree.  
 Figure 3. Coin 3: Galley’s prow.  
 Figure 4. The ‘Atlit ram.  
 Figure 5. Melqart resembling a Seleucid monarch.  
     (a) Caricature of Alexander Balas.  
     (b) Demetrius II?  
     (c) and (d) Antiochus VII?

## REFERENCES

- Bellinger, A. R. 1949. *The excavations at Dura-Europos final report VI: The coins*. New Haven, Conn.: Yale University Press.
- Berlin, A. M. 2006. *Gamla I. The pottery of the second temple period*. IAA Reports 29. Jerusalem: Israel Antiquities Authority.
- BMC Phoenicia = Hill, G. F. 1910. *British Museum catalogue of Greek coins: Phoenicia*. London.
- Casson, L., and J. R. Steffy. 1991. *The Athlit ram*. College Station: Texas A & M University Press.
- NEAEHL = Stern, E., ed. 1993. *The new encyclopedia of archaeological excavations in the Holy Land*. 4 vols. Jerusalem: Israel Exploration Society.
- Sawaya, Z. Forthcoming [2008]. Les monnaies civiques non datées de Bérytos—Reflet d’un passage discret de l’hégémonie séleucide à l’autonomie (102/1–82/1 av. J.C.). *Numismatic Chronicle*.
- SC 2 = Houghton, A., C. Lorber, and O. Hoover. 2008. *Seleucid coins: A comprehensive catalogue. Part II: Seleucus IV through Antiochus XIII*. New York/Lancaster, Penn.



- Seyrig, H. 1958. Monnaies grecques des fouilles de Doura et d'Antioche. *Revue Numismatique* (6<sup>e</sup> serie) 1:171–181.
- . 1962. Les monnaies. In *Oumm el 'Amed, une ville de l'époque Hellénistique aux échelles de Tyr*, eds. M. Dunand et R. Duru, 227–231. Paris: Adrien Maisonneuve.
- SNG Israel 1 = Houghton, A., and A. Spaer. 1998. *Sylloge Nummorum Graecorum Israel 1: The Arnold Spaer collection of Seleucid coins*. London: Italo Vecchi.
- Syon, D. 1992. Gamla—Portrait of a rebellion. *Biblical Archaeology Review* 18(1): 23–37.
- . 2002. Gamla—City of refuge. In *The first Jewish revolt: archaeology, history, and ideology*, eds. A. M. Berlin and J. A. Overman, 134–153. London: Routledge.
- . 2004. *Tyre and Gamla. A study in the monetary influence of southern Phoenicia on Galilee and the Golan in the Hellenistic and Roman periods*. Ph.D. diss. Hebrew University, Jerusalem.
- . Forthcoming. The coins. In *Gamla III. The Shmarya Gutmann excavations 1976–1989. Finds and studies*, ed. D. Syon. Jerusalem: Israel Antiquities Authority.

## The Silver Mint of Damascus under Demetrius III and Antiochus XII (97/6 BC–83/2 BC)

PLATES 71–80

OLIVER D. HOOVER,\* ARTHUR HOUGHTON,  
AND PETR VESELÝ\*\*

The authors present a die study with historical, iconographic, numismatic, and statistical analysis for the silver coinages struck at Damascus under the Seleucid kings Demetrius III and Antiochus XII. Based on the evidence of a production gap in 93/2 BC and die links between issues of 94/3 and 92/1 BC it is suggested that Demetrius may have briefly lost the city in 93/2, thereby explaining conflicting evidence for the king's arrival at Damascus. A new coin of Antiochus XII extends his reign into 83/2 BC—a year later than previously known.

### INTRODUCTION

In 1939, Edward T. Newell, one of the great presidents of the American Numismatic Society and the father of systematic Seleucid numismatic study, presented his findings on the coinages of Demetrius III and Antiochus XII struck at Damascus as part of his monograph, *Late Seleucid Mints in Ake-Ptolemaïs and Damascus (LSM)*. This important catalogue included twenty-two specimens for the reign of Demetrius III and three for that of Antiochus XII. Recent discoveries have now increased the number of known Damascene tetradrachms for these rulers more than fourfold. The existence of previously unknown silver fractions of Demetrius III has also been revealed. In light of these new developments it is useful almost seventy years after Newell to develop a full die study for these interesting late Seleucid coinages.

\*numlit@numismatics.org

\*\*pvesely2002@yahoo.co.uk

## DIE USAGE

The evidence of die usage for Demetrius III indicates that his Damascene tetradrachms were a modest coinage for the period. A single obverse die is known for SE 216 (97/6 BC), possibly indicating that the reign of Demetrius III did not begin until late in the year. Counting all dies used in a particular year, five dies have been identified for SE 217 (96/5 BC), 3 for SE 218 (95/4 BC), 4 for SE 219 (94/3 BC), 2 for SE 221 (92/1 BC), 8 for SE 222 (91/0 BC), 3 for SE 223 (90/89 BC), 2 for SE 224 (89/8 BC), and 2 for SE 225 (88/7 BC).

When Esty's method of estimating the original number of obverse dies is applied to the die data,<sup>1</sup> a maximum of 2 dies are likely to have been used in SE 216, between 5 and 7 in SE 217, between 3 and 5 in SE 218, between 4 and 7 in SE 219, 2 or 3 in SE 221, between 8 and 26 in SE 222, between 8 and 40 in SE 223, between 2 and 3 in SE 224, and 3 to 17 dies in SE 225 (see Table 1). These estimates are calculated at the 95 percent confidence level and the observed number of dies is taken into consideration in cases when it is greater than the lower endpoint of the confidence interval of the estimated number of dies.

Table 1. Estimated Damascene Tetrachm Dies for Demetrius III

Year (SE)	Observed data			Estimates		95% confidence interval for the number of dies
	coins	dies	singletons	coverage	dies	
216	7	1	0	100%	1	0.7–1.5
217	28	5	1	96.4%	5.7	4.5–7.2
218	11	3	0	100%	3	2.0–4.6
219	15	4	1	93.3%	4.8	3.2–7.2
220	0	0	0	–	–	–
221	14	2	0	100%	2	1.5–2.7
222	15	8	4	73.3%	13.6	7.4–26.4
223	4	3	2	50%	8	8–40
224	8	2	0	100%	2	1.3–3.3
225	3	2	1	66.7%	3.8	3.2–16.8

While the extremely small size of the samples for each year makes all of these numbers statistically dubious,<sup>2</sup> it seems clear that there was fairly stable annual

1. W. Esty, "How to Estimate Dies and the Average Size of a Sample," *Numismatic Chronicle* 166 (2006), pp. 359–364.

2. The point estimates of the coverage should be taken extremely cautiously because their confidence intervals cannot be computed via Esty's formula, which is not applicable for such small samples (see Esty, *ibid.*, formula (5) and discussion on p. 362). Moreover, the obverse dies A6, A8, A11 and A19 were used in more than one year (the die A11 was even used in three years: SE 219, 221 and 222), which somewhat distorts the observed

die usage in the period from SE 217 (96/5 BC) to SE 219 (94/3 BC).<sup>3</sup> If Demetrius' capture by the Parthians brought his Damascene coinage to an end early in SE 225 (88/7 BC), then this would account for the apparently reduced production in this year. It is somewhat more difficult to explain the low die usage of SE 221 and what appears to be a significant increase in production in SE 222 and 223. We hypothesize (below) that the absence of coinage in SE 220 (93/2 BC) indicates that Damascus was lost to Demetrius this year; if so, the lowered rate of die usage in SE 221 (92/1 BC) suggests that he managed to reclaim the city only later in that year.

In addition to the absence of recorded coins for Demetrius in SE 220, the obverse die link (A11) between issues of SE 219 (P52–P54) and SE 221 (P55–P60) also argues against the possibility that a Damascene coinage was actually struck for Demetrius in SE 220, but has now been lost. Assuming that the large die estimates for SE 222 and SE 223 are not completely artifacts of the small sample size and the presence of singleton dies, the impressive leap in production at this time may possibly have had something to do with funding the king's conflict with the Hasmonaean priest-king Alexander Jannaeus. The battle of Shechem, which pitted the forces of these two rulers against each other, is usually dated to c. 88 BC (i.e., SE 224), but the language of Josephus does not preclude the possibility that the battle took place in late SE 223 (90/89 BC).<sup>4</sup>

Unfortunately, the tetradrachm sample for Antiochus XII, which amounts to a mere twelve specimens spread over five years, is far too small to make a reasonable production estimate. The extreme rarity of the coins prompted Newell (who only knew of three examples) to suggest that the king had exhausted the Damascene treasury, but the identification of two distinct dies for SE 226 (87/6 BC) and of three distinct dies for SE 227 (86/5 BC) raise the possibility that the mint could have continued to produce at roughly the same annual rate as it had under Demetrius III in the first two years of his reign. The single die known for the last two years, however, may possibly point to a lack of the resources necessary to continue the earlier higher rate of production. Single dies are also known for the tetradrachms of Aretas III, who succeeded Antiochus XII at Damascus, and Tigranes II, whose forces occupied the city and caused coins to be struck in the name of the Armenian king from SE 241 (72/1 BC) to SE 243 (70/69 BC).<sup>5</sup> The

numbers of coins struck from these dies in the individual years when these dies were used.

3. A more accurate picture of the total production of dies at Damascus in this period may be obtained if the die data is aggregated, either for the nine years that the mint struck coinage, or in the two year sets in which coins were issued—that is, SE 216–219, and SE 221–225, see statistical appendix.

4. Jos. AJ 13.377–378, 384.

5. Y. Meshorer, *Nabataean Coins* (Jerusalem, 1975), no. 5; Y. T. Nercessian, *Silver Coinage of the Artaxiad Dynasty of Armenia* (Los Angeles, 2006), pp. 80–82.

extreme rarity of all of these coins may indicate that the vast majority disappeared into the melter's pot, perhaps during the course of the reorganization of Syria as a Roman province (64 BC) and the Roman civil wars (49–30 BC).

### METAL QUALITY

Many of the tetradrachms and drachms of Demetrius III are remarkable for exhibiting tears in the surface silver that reveal an inner core of darker and often brownish metal. This feature has been recognized for nos. 11, 30, 32, 35, 40, 49, 53, 55, and 62–65 in the tetradrachm catalogue and for no. 2 of the drachm catalogue. At first it was thought that the coins exhibiting this characteristic were examples of officially plated coins,<sup>6</sup> but an examination of several specimens under the microscope failed to reveal the tell-tale copper cores that characterize most ancient counterfeits of Seleucid coins.<sup>7</sup> Moreover, specific gravity analysis of a tetradrachm of Demetrius III of SE 219 (94/3 BC) and two tetradrachms of Antiochus XII of SE 226 (87/6 BC) and SE 229 (84/3 BC) yielded results of 10.08, and 9.99 and 9.85, respectively. Since the specific gravity of pure silver is 10.46, it is clear that the darker core metal is of a different, probably more debased, composition from that of the surface.<sup>8</sup>

This evidence, which should be confirmed by the testing of additional specimens and full metallurgical analysis,<sup>9</sup> may suggest that the Damascene coins had their appearances improved through a process of surface enrichment that drew the good silver onto the surface while relegating impurities to the core. Some degree of surface enrichment can occur from the heating of the blanks and the force of the hammer blow at the time of striking. However, the tendency of the surface silver to delaminate from the baser core may indicate that a more aggressive process was employed at Damascus to draw the pure silver to the surface. The tetradrachm coinage of Philip I at Antioch, which appears to have been made of silver debased to the same level as that of Damascus,<sup>10</sup> rarely features the kind of delamination that appears on the Damascene coins of Demetrius III. It is tempting to think that a method of pickling, like that later used by the Romans to produce attractive silver surfaces on heavily debased *antoniniani* and *nummi*,<sup>11</sup> might have been employed to improve the appearance of late Seleucid coinage at Damascus. If this interpreta-

6. For the possibility of official plated Seleucid coins, see CSE 2, 873, which has die links to the regular series at Antioch and SC 2, Appendix 7: Silver Plated Seleucid-type Coins.

7. For examples, see CSE 2, 854–906.

8. The coins tested were CSE 2, 799, 816–817.

9. The equipment for proper metallurgical analysis was unavailable to the authors.

10. The average specific gravity in a sample of 38 Philip tetradrachms of Antioch was 9.75.

11. L. H. Cope, "Surface-silvered ancient coins," in E. T. Hall and D. M. Metcalf, eds., *Methods of Chemical and Metallurgical Investigation of Ancient Coinage* (London, 1972), pp. 266–271.

tion is correct, then the Damascus coinage of Demetrius III may represent one of the earliest clear examples of deliberate surface enrichment.

### Obverse Types

The obverse portraits on the coins of both Demetrius III and Antiochus XII are relatively unexceptional for Seleucid monarchs of the late second and early first centuries BC. The kings always appear in profile facing to the right, wear diadems with ends that fall limply at the nape of the neck, and sport similar hairstyles featuring a hornlike-lock over the ear. This last feature is somewhat more pronounced on the issues of Demetrius III than on those of Antiochus XII.

The only remarkable element of the portraits is the beards worn by the kings. On the issues of Demetrius III, a thin beard along the jaw-line is usual from SE 216 (97/6 BC) to the first part of SE 219 (94/3 BC). However, during the course of the latter year, the beard becomes fuller and bushier, a form that it retains until the final emissions of SE 225 (88/7 BC). Antiochus XII, on the other hand, appears clean-shaven from SE 226 (87/6 BC) to SE 227 (86/5 BC), but grows a beard for the coinages of SE 228–230 (85/4–83/2 BC).

Since the standard Hellenistic royal portrait was clean-shaven in emulation of Alexander the Great,<sup>12</sup> it seems probable that the beards of Demetrius III and Antiochus XII were grown for some special purpose. Earlier bearded portraits of Seleucus II and Demetrius II (first reign) seem to be related to their respective Parthian campaigns.<sup>13</sup> The beards sported by Philip I Philadelphus and Antiochus XI Philadelphus on their Cilician coinage before the destruction of Mopsuestia are probably indicators of mourning and a desire for revenge upon the city for the role that it played in the murder of their brother Seleucus VI Epiphanes.<sup>14</sup> As a later parallel, the Roman triumvirs Octavian and Mark Antony grew beards as outward signs of mourning and their vows to avenge the murder of Julius Caesar.<sup>15</sup> The beards worn by Seleucus VI and Antiochus X Eusebes on their Antiochene coinages may also be related to vows of revenge or campaigning.<sup>16</sup>

12. R. R. R. Smith, *Hellenistic Sculpture* (New York, 1991), p. 21.

13. SC 1.1, p. 233 with nos. 685–686, 711–712, 749–750, 759, 788, 795–798, 822–824; W. Moore, "The Divine Couple of Demetrius II, Nicator, and his Coinage at Nisibis," *American Numismatic Society Museum Notes* 31 (1986), pp. 137–139.

14. SC 2436–2437, 2439; A. Houghton, "The double portrait coins of Antiochus XI and Philip I," *Schweizerische Numismatische Rundschau* 66 (1987), pp. 79–84.

15. Dio 48.34.3; M. Crawford, *Roman Republican Coinage* (Cambridge, 1974), nos. 488/1–2, 492/1–2, 496/1–2, 534/3, 538/1, 540; J. Pollini, *The Portraiture of Gaius and Lucius Caesar* (New York, 1987), 63 n. 108, 71–73, 91; J. Pollini, "Review of D. Boschung," *Die Bildnisse des Augustus*, Pt. 1, vol. 2 (Berlin, 1993); *The Art Bulletin* (December 1999), p. 5.

16. A detailed study of bearded Seleucid portraits is currently being prepared by C. Lorber and P. Iossif.

If the beard of Demetrius III is related to campaigning, it almost certainly has something to do with the drawn-out war against his cousin Antiochus X. This conflict probably ended only in c. 88 BC, when the latter was killed in battle and Antioch fell vacant.<sup>17</sup> In this case, the beard should be taken as the visual token of a vow of vengeance that ceased to have meaning after the death of Antiochus X. Demetrius' portrait starts out bearded on his brief coinage at Antioch but quickly becomes beardless. At Uncertain Mint 127 in Cilicia he is always clean-shaven.<sup>18</sup> All of these coins probably date to c. 88/7 BC.

Assuming that the beard of Antiochus XII had some similar meaning, two possible explanations present themselves on the basis of the poor sources for his reign. It might very well have been grown in the context of his final grand campaign against Aretas III and the Nabataean Arabs, who had been a major threat to Damascus since the outset of Antiochus' reign.<sup>19</sup> Despite scant chronological evidence, this war is generally believed to have taken place in 84 BC, the very year in which the beard first appears on the coinage.<sup>20</sup> As second, but much less attractive possibility is that Antiochus XII grew his beard to announce his desire for revenge against his brother Philip I, who had previously attempted to seize Damascus in his absence.<sup>21</sup>

#### Reverse Types

The identity of the female cult statue depicted on the Damascene tetradrachms of Demetrius III has been a matter of scholarly dispute. Early commentators identified the statue variously as that of Demeter, Lydian Kore, or Ephesian Artemis.<sup>22</sup> Newell first identified the statue as that of native Atargatis, the *Dea Syria*, based on its decidedly eastern character and the belief that any important fertility goddess would be known by that name in Syria.<sup>23</sup> Lucian of Samosata, writing in the second century AD, offers a description of Atargatis' cult statue at Hierapolis (Bambyce) that is consistent with the iconography:

καὶ τὰ μὲν ξύμπαντα ἀτρεκεῖ λόγῳ Ἥρη ἐστίν, ἔχει δὲ τι καὶ Ἀθηναίης καὶ Ἀφροδίτης καὶ Σεληναίης καὶ Ῥέης καὶ Ἀρτέμιδος καὶ Νεμέσιος καὶ Μοιρέων. χειρὶ δὲ τῇ μὲν ἐτέρῃ σκῆπτρον ἔχει, τῇ ἐτέρῃ δὲ ἄτρακτον, καὶ ἐπὶ τῇ κεφαλῇ ἀκτῖνάς τε φορέει καὶ πύργον καὶ κεστὸν τῷ μούνῃ τὴν Οὐρανίην κοσμέουσιν.

17. O. Hoover, "A Revised Chronology for the Late Seleucids at Antioch," *Historia* 56.3 (2007), pp. 291–295.

18. SC 2444–2449; CSE 390–392, 414; CSE 2, 796; SMA 345a–b.

19. Jos. AJ 13.390–391; BJ 1.101–102.

20. E. Bickerman, *Chronology of the Ancient World* (Ithaca, 1980), p. 131; P. Green, *Alexander to Actium* (Berkeley, 1993), p. 721.

21. Jos. AJ 13.387–389.

22. R. Fleischer, *Artemis von Ephesos und verwandte Kultstatuen aus Anatolien und Syrien* (Leiden, 1973), pp. 265–266.

23. LSM, p. 84 and n. 35.

when you look upon Hera [Atargatis], she presents great diversity of details; for although the whole could truly be considered Hera [Atargatis], nonetheless it contains something of Athena, Aphrodite, Selene, Rhea, Artemis, Nemesis and the Moirai. In one hand she holds a scepter, and in the other a distaff; and on her head she bears rays, and a tower, and that *kestos* (girdle) with which men array Aphrodite Ourania alone.<sup>24</sup>

The statue on the Damascene coins includes many of the features that Lucian attributes to the later Heliopolitan statue. Although lacking the mural crown, scepter, and distaff, on several tetradrachm specimens, rays clearly shine forth from its veiled head and the ends of a long fillet hang down on each side, probably representing the *kestos*. The prominent grain ears at the shoulders and the heavily ornamented body associate the image with Rhea and Ephesian Artemis, respectively.<sup>25</sup> The flower in the statue's hand alludes to Aphrodite and the large face (frequently worn) displayed on its chest probably represents the gorgoneion of an aegis, the attribute of Athena.<sup>26</sup> However, unlike its counterpart at Hierapolis, the Damascene cult statue as depicted on the Seleucid coins has no obvious attributes to suggest syncretism with Selene, Nemesis, or the Moirai.

The Nike reverse type employed on the drachms of Demetrius III is unremarkable for the most part, as it is ultimately drawn from the standard repertoire of Hellenistic victory motifs. However, it is the use of the same type for the early Damascene bronzes of Demetrius III that permits the attribution of the drachms to the same city.<sup>27</sup> This attribution is further supported by the use of dates and letter-forms similar to those found on the tetradrachms, and a control link to the hemidrachms, all of which have provenances in Coele Syria.<sup>28</sup>

The hemidrachms of Demetrius III feature the unique reverse type of a diadem knotted at the bottom. As the single control A associates them with the drachms of SE 217 (96/5 BC) it is difficult to escape the conclusion that both denominations were struck to commemorate Demetrius' coronation late in the previous year. The diadem reverse type is notable not only because it is entirely unprecedented on Seleucid coinage, but also because it appears to be the iconographic source for one

24. Lucian, *Dea Syr.* 31.

25. For the interpretation of the body of Atargatis and Ephesian Artemis as covered in ornaments, rather than breasts, see Fleischer, p. 265. Newell thought that the ornaments were leaves, but this seems unlikely.

26. For the identification of the object as a flower, rather than three ears of grain (*per* Newell), see Fleischer, p. 264. Fleischer only illustrates relatively worn specimens and therefore describes the face as "die große, ovale Scheibe auf der Brust."

27. A. Houghton and A. Spaer, "New Silver Coins of Demetrius III and Antiochus XII at Damascus," *Schweizer Münzblätter* 157 (February 1990), p. 2.

28. Houghton and Spaer, *SM* 157 (February 1990), pp. 2–3.





Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

of the ubiquitous bronze series of his Jewish nemesis, Alexander Jannaeus (Fig. 1).<sup>29</sup>

Damascus is known to have produced only tetradrachms and bronzes for Antiochus XII. The reverse type of the former continues the local iconographic program begun under Demetrius III by depicting the cult statue of Hadad, the consort of Atargatis. There can be no doubt that the deity represented is Hadad because the statue depicted on the coins also conforms to the description of his image at Hierapolis. According to Lucian, the Hierapolitan image

καὶ δῆτα τὸ μὲν τοῦ Διὸς ἄγαλμα ἐς Δία πάντα ὀρῇ καὶ κεφαλὴν καὶ εἵματα καὶ ἔδρην, καὶ μιν οὐδὲ ἐθέλων ἄλλως εἰκόσεις.

is Zeus although they call him by another name [Hadad]...and the god sits on bulls. Certainly, the statue of Zeus resembles Zeus in every respect, such as head and garments and throne; and you would not willingly liken him unto anything else.<sup>30</sup>

The foreparts of two bulls are clear on the coins as is the bearded face inviting comparison with Zeus, the Greek counterpart to Hadad the storm god. The statue also holds a prominent grain-ear on the coins, indicating his quality as a fertility god, which the god of Damascus also shared with other syncretistic avatars of Hadad (i.e., Zeus Heliopolitanus and Zeus Dolichenus, etc.) (Fig. 2). The high pointed cap is not a usual attribute of Hellenic Zeus and may be derived from the Egyptian *hedjet* crown worn by Hadad in his early sculptural depictions at Ras Shamra (Ugarit) and elsewhere (Fig. 3).

While the silver fractions of Demetrius III are somewhat generic in their iconography of victory and Hellenistic kingship, the tetradrachm reverse types of Demetrius III and Antiochus XII are notable as the final manifestation of an earlier trend towards civic iconography. Under Demetrius I Soter and Alexander I Balas, local religious types first began to appear on the silver issues struck in his name at Mallus and Tarsus in Cilicia.<sup>31</sup> On these coins, the indigenous deities Athena Magarsia and Sandan (Figs. 4–5), respectively, replaced the usual dynastic or personal types of the king. Also under Alexander I, a new local silver coinage was introduced in Phoenicia and Coele Syria featuring an eagle reverse type drawn from the Ptolemaic coinage that had been the recognized currency in the region for a century before the Seleucid conquest (Fig. 6).<sup>32</sup> Such local types continued

29. A. Houghton and A. Spaer, *SM* 157 (February 1990), 3; Y. Meshorer, *A Treasury of Jewish Coinage* (Jerusalem, 2001), pp. 37–38, Group K.

30. Lucian, *Dea Syr.* 31.

31. *LSM*, p. 84; *CSE* 475; *CSE* 2, 443–445.

32. O. Hoover, “*Ceci n’est pas autonomie: The Coinage of Seleucid Phoenicia as Royal and Civic Power Discourse*,” *Topoi* Suppl. 6 (2004), pp. 492–496. An abortive attempt to introduce a local silver coinage in Phoenicia may already have taken place under Antiochus V,



Figure 7

to appear on the Seleucid silver of these cities until the kings ceased to exercise their authority over them. In the cases of Phoenician Tyre and Sidon, the local eagle reverse continued on the silver of the autonomous period, while Sandan and Athena Magarsia were relegated to the civic bronze coinages of Tarsus and Malus in Cilicia.<sup>33</sup> The new civic quality given to the royal tetradrachms struck at Damascus for Demetrius III and Antiochus XII also survived the end of Seleucid rule. The Damascene tetradrachms of Aretas III and Tigranes II (Fig. 7, ANS 1944.100.76964) prominently display the city's Tyche on their reverses rather than some distinctly royal emblem.

### INSCRIPTIONS

The numismatic epithets of Demetrius III, *Theos Philopator Soter* ("Father-loving God and Savior") are all calculated to advertise his descent from the Demetrian branch of the Seleucid dynasty. The title *Theos* had been borne by his grandfather, Demetrius II, during his first reign, while Soter had been the epiklesis of his great-grandfather Demetrius I. *Philopator* indicates the king's filial piety towards his deceased father, Antiochus VIII Grypus.

The epithets *Epiphanes Philopator Kallinikos* ("Illustrious, Father-loving, and Nobly-victorious") employed by Antiochus XII serve a similar function. *Epiphanes* had been a regular title of his father, Antiochus VIII Grypus. *Kallinikos* may have been intended as an amplification of his grandfather's title *Nikator* although it was probably also intended to present Antiochus XII as a great war leader who could protect his subjects from the menace posed by the Nabataean Arabs and Hasmonaean Jews.

The cult-name *Dionysos*, which only appears on a unique tetradrachm of SE 230 (83/2 BC), casts Antiochos as the embodiment of the Greek wine-god. Pre-

assuming that the three eagle tetradrachms inscribed BASILEWS ANTIOCOU EUPATOROS are not posthumous issues produced to reinforce Alexander's claim to be an heir of Antiochus IV and therefore the brother of Antiochus V. For discussion of the issue, see O. Mørholm, *International Numismatic Convention, Jerusalem* 1963, pp. 78–79 and A. Houghton and G. Le Rider, "Le deuxième fils d'Antiochos IV à Ptolémaïs," *Schweizerische Numismatische Rundschau* 64 (1985), p. 76.

33. SNG Levante 927–970, 996, 1009, 1015–1016, 1265, 1268–1269, 1272, 1276, 1278, 1280.

sumably Dionysus is invoked here in his role as the mythological conqueror of the east, rather than as a vegetation god. The adoption of *Dionysos* just before the final conflict with the Nabataean Arabs may be no coincidence. Dushara (Dousares), the primary Nabataean deity, was not infrequently identified with Greek Dionysus because of his powers as a vegetation deity.<sup>34</sup>

The epigraphy of the coin legends exhibits several notable characteristics. As at Antioch in this period, the *alphas* tend not to be fully formed, but are written as *lambdas* with a dot in the middle and the *upsilons* look like the Latin letter V. The *omicron*, however, retains its traditional small size at Damascus, while at Antioch it had become a much larger letter.

The four-bar *sigmas* generally have very weak apexes, which often give them the appearance of square *sigmas* on worn examples. This tendency is also apparent on the associated bronze coinages and seems to be peculiar to Damascus. The form continued to be in vogue for the city's probable bronze issues under Cleopatra Selene and Antiochus XIII, as well as for Aretas III and Tigranes II.<sup>35</sup> In contrast, the contemporary Seleucid mints at Antioch and in Cilicia retained strongly formed four-bar *sigmas*.

Also interesting is a special form of *sigma*, composed of two weak arcs that is used to represent the numeral 200 in the dates at Damascus. This peculiar letter-form had already appeared on Damascene issues of Antiochus IX Philopator.<sup>36</sup>

## HISTORICAL CONCLUSIONS

The Damascene silver coins of Demetrius III are a valuable source because they are sequentially dated, thereby allowing us to reconstruct the chronology of his reign at the city. Nevertheless, the coins present problems of interpretation. The first issue, dated to SE 216 (97/6 BC), seems to conflict with Josephus' report that Ptolemy Lathyrus installed Demetrius in Damascus upon the death of Antiochus XI (c. 93 BC).<sup>37</sup> This ambiguous testimony can only lead to the conclusion that Josephus or his source is mistaken and that the reign of Demetrius III actually began in 97/6, as the coins indicate. While as a rule the documentary sources are preferable to literary ones, the present die study raises the possibility that Josephus has conflated two separate arrivals for Demetrius at Damascus.

None of Demetrius's coins carries a legible date that can be read as SE 220 (93/2 BC) and die links between the issues of SE 219 (94/3 BC) and SE 221 (92/1 BC) indicate that there was probably no Damascene coinage for Demetrius in that

34. Arrian 7.20; Hesych. s.v. Διόνυσος.

35. O. Hoover, "Dethroning Seleucus VII Philometor (Cybiosactes): Epigraphical Arguments against a Late Seleucid Monarch," *Zeitschrift für Papyrologie und Epigraphik* 151 (2005), 98.

36. Cf. SNG Spaer 2755–2758.

37. Jos. *AJ* 13.370.

year. This hiatus of a single year suggests that Demetrius might have briefly lost the city during the war against Antiochus X, who probably ruled in Antioch until 89/8 BC.<sup>38</sup> If Demetrius had marched north to support his brother Antiochus XI in the disastrous battle with Antiochus X in 93 BC, Damascus could have been briefly occupied by his southern enemies, Alexander Jannaeus and the Nabataean Arabs.

If the coinage hiatus of SE 220 represents a period when Damascus was lost to Demetrius III, then perhaps when Josephus claims that the king was installed in the city shortly after the death of Antiochus XI (c. 93 BC), he refers only to a second reign beginning in SE 221 (92/1 BC). This interpretation is based on the premise of a much later Syrian intervention by Ptolemy Lathyrus than is usually accepted. Therefore, perhaps Josephus has conflated an initial installation of Demetrius III by Ptolemy in late 97/6 BC and a restoration (probably without Cypriot assistance) in later 92/1 BC.<sup>39</sup>

The sequential dates on the Damascene tetradrachms of Antiochus XII are very important for establishing the period of his reign because chronological markers are entirely lacking for him in the ancient authors. Antiochus failed to impose his authority much beyond Damascus. He was later excluded from the Seleucid stemma by authors drawing on sources written from the perspective of the dynasty at Antioch. Antiochus XII is only named in the account of Josephus as the immediate successor to Demetrius III,<sup>40</sup> but unfortunately no synchronism is provided that might allow for the precise dating of the end of his reign. The only dating evidence for his death in battle against the Nabataean king Aretas III comes from the coinage, which ends with the issue of SE 230 (83/2 BC).

Josephus reports that on a previous occasion when Antiochus XII was campaigning against the Nabataean Arabs, Damascus had been betrayed to his brother Philip I. However, failing to reward properly the guard who had opened the gates to him, Philip soon found himself locked out again.<sup>41</sup> As there is no coinage attributable to Philip at Damascus and the sequence of dates on the coins of Antiochus XII is unbroken, it seems likely that this episode was very brief indeed.<sup>42</sup> This may also be inferred from Josephus' statement that once Philip had been shut out, the guard kept Damascus safe for Antiochus XII (τὴν Δαμασκὸν Ἀντιόχῳ διεφύλαξεν). The entire episode took place after the campaign season had begun, but before it had concluded.

38. Hoover, *Historia* 56.3 (2007), p. 289.

39. For the initial installation, see O. Hoover, "A Late Hellenistic Lead Coinage from Gaza," *Israel Numismatic Research* 1 (2006), p. 28.

40. Jos. *AJ* 13.387.

41. Jos. *AJ* 13.389.

42. *LSM*, 91.

## APPENDIX. STATISTICAL ANALYSES

Petr Vesely<sup>43</sup>

**Weight analysis.** For the purpose of the weight analysis of tetradrachms of Demetrius III, no. 70 (LSM 1266) was excluded because the coin is heavily corroded and delaminated; its weight of 12.96 g is also more than one gram below the second lightest coin in the corpus (no. 94, 13.99 g). The weights of the other tetradrachms vary between 13.99 g and 16.20 g. Although 13.99 g is low for a tetradrachm, we decided not to exclude this coin because there are no other obvious outliers either in the sense of low weight<sup>44</sup> or in the sense of the state of preservation.

Six tetradrachms in the corpus are holed and the weights of four of them are known: nos. 25 (14.65 g), 35 (15.14 g), 37 (16.12 g) and 100 (15.65 g). These four coins were left in the sample in order not to decrease its size and because the distortion of their weights is negligible.<sup>45</sup>

As for the tetradrachms of Antiochus XII, tetradrachms nos. 9 and 12 were removed because both coins were heavily cleaned. The weight loss caused by the heavy cleaning might not be negligible and an inclusion of such coins into the

43. The following abbreviations are used: Conover 1999 = W. J. Conover, *Practical Non-parametric Statistics* (3rd ed.; New York, 1999). Esty 1986 = W. W. Esty, "Estimating the size of a coinage: A survey and comparison of methods," *Numismatic Chronicle* 146 (1986) pp. 185–215. Esty 2006 = W. W. Esty, "How to estimate the original number of dies and the coverage of a sample," *Numismatic Chronicle* 166 (2006) pp. 359–364. Esty and Banfield 2003 = W. W. Esty and J. D. Banfield, "The box-percentile plot," *Journal of Statistical Software* 8, 17 (2003), pp. 1–14. Esty and Carter 1991–2 = W. W. Esty, and G. F. Carter, "The distribution of the numbers of coins struck by dies," *American Journal of Numismatics* 3–4 (1991–2), pp. 165–86. Hoover 2007 = O. D. Hoover, "A Revised Chronology for the Late Seleucids at Antioch (121/0–64 BC)," *Historia* 56, 3 (2007), pp. 280–301. Silverman 1993 = B. W. Silverman, *Density Estimation for Statistics and Data Analysis* (Chapman and Hall, London, 1993; repr. of 1st ed. publ. 1986).

44. The ten lightest analyzed coins have the following weights (in grams): 13.99, 14.20, 14.48, 14.49, 14.57, 14.59, 14.65 (holed coin), 14.72, 14.88 and 14.91.

45. The argument for the negligibility of weight distortion is as follows. First, it seems that these coins were pierced, not drilled. The metal was mainly displaced around the holes and a possible loss of some part of the metal, if any, would not be great. Secondly, even if the hole in the coin was created by drilling and all drilled metal was lost, the relative loss of its weight is approximately equal to  $d^2/D^2$ , where  $d$  is the diameter of the hole and  $D$  is the diameter of the coin (this approximation supposes that coins can be taken as homogeneous cylinders). If  $w$  is the observed weight of a holed coin and  $W$  its supposed weight without the hole, then  $w = W - d^2/D^2 \times W$ , so that  $W = w/(1 - d^2/D^2)$ . The ratio  $d/D$  is about 0.1 for the four coins, so that the ratio  $1/(1 - d^2/D^2)$  is approximately equal to 1.010. So, even in the unlikely case that all metal from the hole was lost, a weight without the hole would be only about 1.0% above the observed weight. Such an increase would have negligible impact on the statistics presented in the next paragraphs.

weight analysis might distort its results. Moreover, the weight of 13.10 g for no. 9 is more than two grams below the second lightest coin in the corpus (no. 1, 15.19 g). Note that no coin in either corpus has an atypically high weight.

The coinage of Philip I from the mint of Antioch was roughly contemporary with the coinages of his brothers Demetrius III and Antiochus XII from the mint of Damascus examined here. As co-authors Hoover and Houghton accumulated the corpus of Philip I's Antiochene tetradrachms, these coins were included in our analysis in order to put the Damascus data into a broader context, and to determine whether, from the metrological point of view, the Damascus mint held to the same standard as the Antioch mint. For the sake of brevity, the list of Philip I coins is not presented here, although this corpus presently contains 183 coins in total; weights of 71 of them are unknown. Only one coin (no. 40) was excluded from the analysis because of its atypically high weight of 16.52 g.

Table 1 presents an overview of the excluded and holed coins and the statistical characteristics of the analyzed coins.<sup>46</sup> In addition, two subgroups of coins of Demetrius III are examined separately: coins dated before SE 220, which probably correspond to his first reign in Damascus, and coins dated after SE 220, which probably correspond to his second reign. Table 2 shows the weight frequencies in individual years; Figures 1 and 3 show the kernel estimates of weight distributions;<sup>47</sup> Figures 2 and 4 show the box-percentile plots;<sup>48</sup> and Figure 5 shows the cumulative weight distributions.

According to Table 1 and Figures 1–2, there is no significant difference between the weight distributions of Demetrius III's tetradrachms in the two examined time periods. The slightly heavier left tail (more probable low weights) of the weight distribution in the second period can be explained by sampling error. This is confirmed by the two-sided Kolmogorov-Smirnov test, which has a p-value of 0.732 (the Kolmogorov-Smirnov statistic is 0.143). It seems that the quality of Demetrius III's tetradrachms, at least in terms of weight, remained unchanged during both his reigns.

46. An unbiased estimate of the standard deviation was used (i.e., the number of observations minus one was used as a divisor). The skewness and kurtosis were computed with a correction for bias.

47. Gaussian kernels were used with the bandwidths given by the equation (3.31) proposed by Silverman 1993, p. 48.

48. The box-percentile plot is a modified version of the well-known boxplot. At any height the width of the irregular 'box' is proportional to the percentile of that height, up to the fiftieth percentile; above the fiftieth percentile the width is proportional to 100 minus the percentile. Thus, the width at any given height is proportional to the percentage of observations that are more extreme in that direction. As in boxplots, the median, twenty-fifth, and seventy-fifth percentiles are marked with line segments across the box (solid and dotted lines, respectively). See Esty and Banfield 2003.

Table 1. Resume of data samples and their statistical characteristics

	Demetrius III			Ant. XII	Ph. I
	Total	Before SE 220	After SE 220		
<b>Total number of coins</b>	105	61	44	12	183
<b>Weight unknown</b>	15	9	6	0	71
<b>Excluded</b>	1	0	1	2	1
<b>No. of analyzed coins (of them holed)</b>	89 (4)	52 (3)	37 (1)	10 (0)	111 (0)
<b>Mean</b>	15.51	15.54	15.47	15.74	15.60
<b>Standard deviation</b>	0.48	0.44	0.54	0.34	0.35
<b>Interquartile range</b>	0.66	0.59	0.76	0.55	0.34
<b>Skewness</b>	-0.87	-0.79	-0.87	-0.74	-2.07
<b>Kurtosis</b>	3.58	3.77	3.27	2.11	8.77
<b>Minimum</b>	13.99	14.20	13.99	15.19	14.13
<b>25th percentile</b>	15.22	15.27	15.12	15.47	15.49
<b>Median</b>	15.60	15.59	15.60	15.86	15.66
<b>75th percentile</b>	15.88	15.86	15.88	16.02	15.83
<b>Maximum</b>	16.20	16.20	16.19	16.11	16.08

Table 2. Weight frequencies

Weight (g)	Demetrius III											Antiochus XII										Philip I
	Total	Seleucid year										Total	Undat.	Seleucid year								
		216	217	218	219	220	221	222	223	224	225			226	227	228	229	230				
above 16.40																				1		
16.20–16.39	1			1																		
16.00–16.19	13	1	3	1	2		2	1	1	2		3		1	1		1			3		
15.80–15.99	13	2		4	1		2	1	1	1	1	3		1	1		1			27		
15.60–15.79	18	1	5		4		2	3		3		2			1			1		41		
15.40–15.59	14		6	3	1		2	2				1		1						20		
15.20–15.39	8	1	3		2			2				1			1					8		
15.00–15.19	9		3	1	1		2	2				1	1							6		
14.80–14.99	5		1		2		1	1												2		
14.60–14.79	2		1					1												1		
14.40–14.59	4		1						1	2												
below 14.40	3				1		1		1			1				1				3		
Unknown	15	2	5	1	1		2	2			2									71		
Total	105	7	28	11	15	0	14	15	4	8	3	12	1	3	4	1	2	1		183		



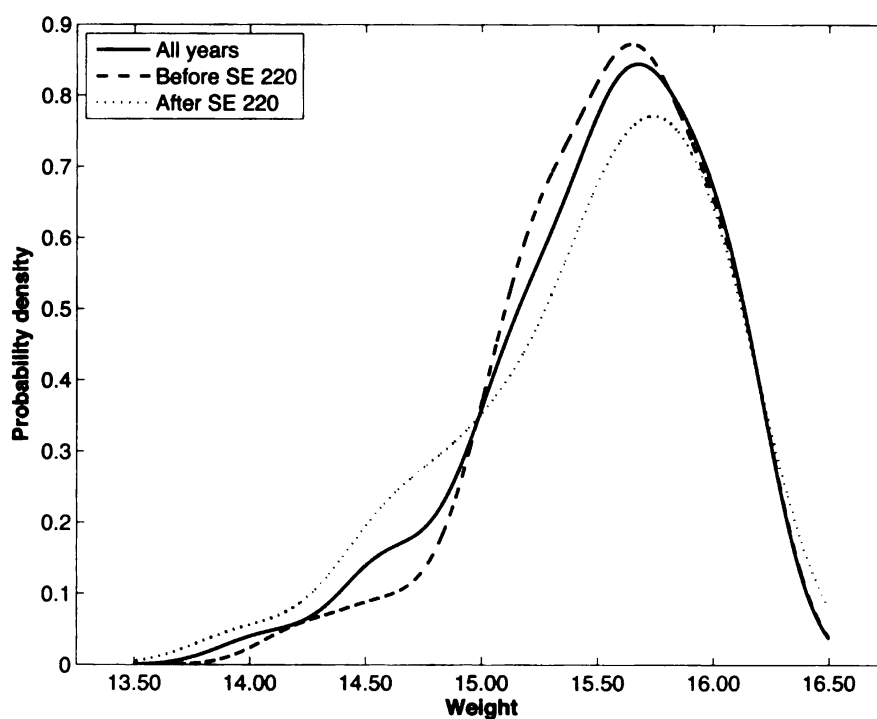


Figure 1. Demetrius III, weight distributions

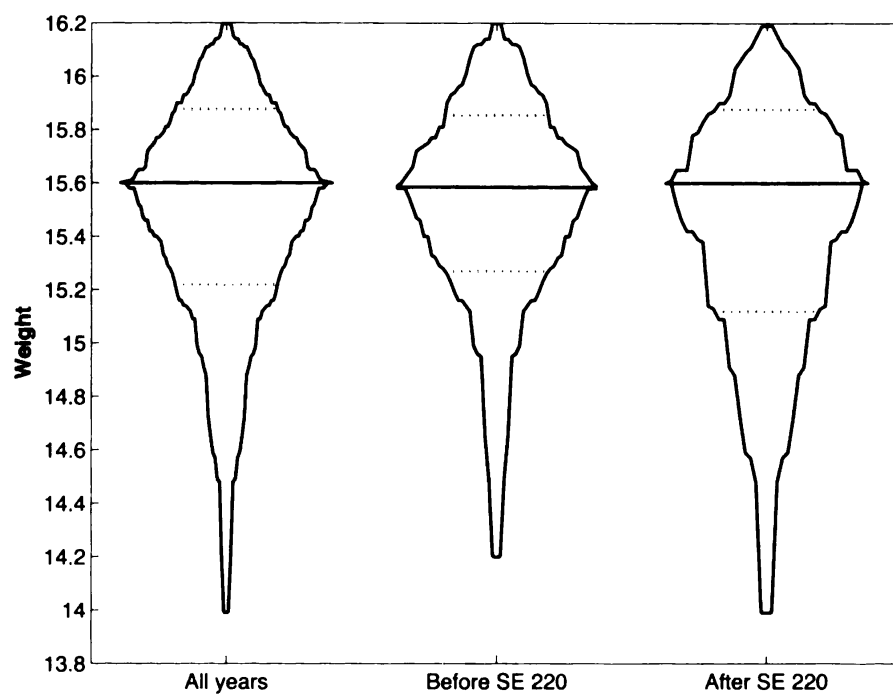


Figure 2. Demetrius III, box-percentile plots

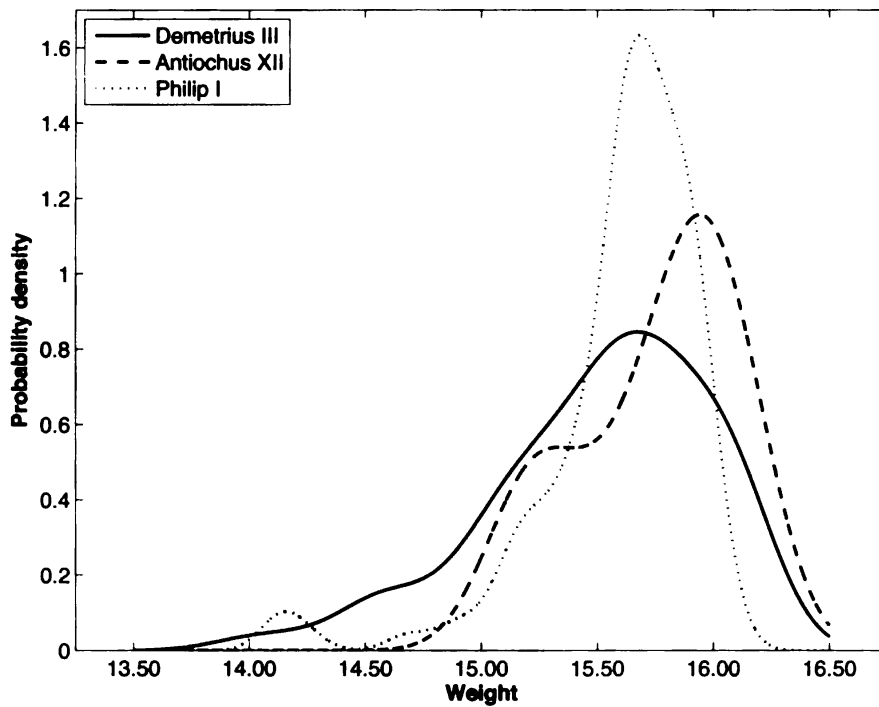


Figure 3. Demetrius III, Antiochus XII and Philip I, weight distributions

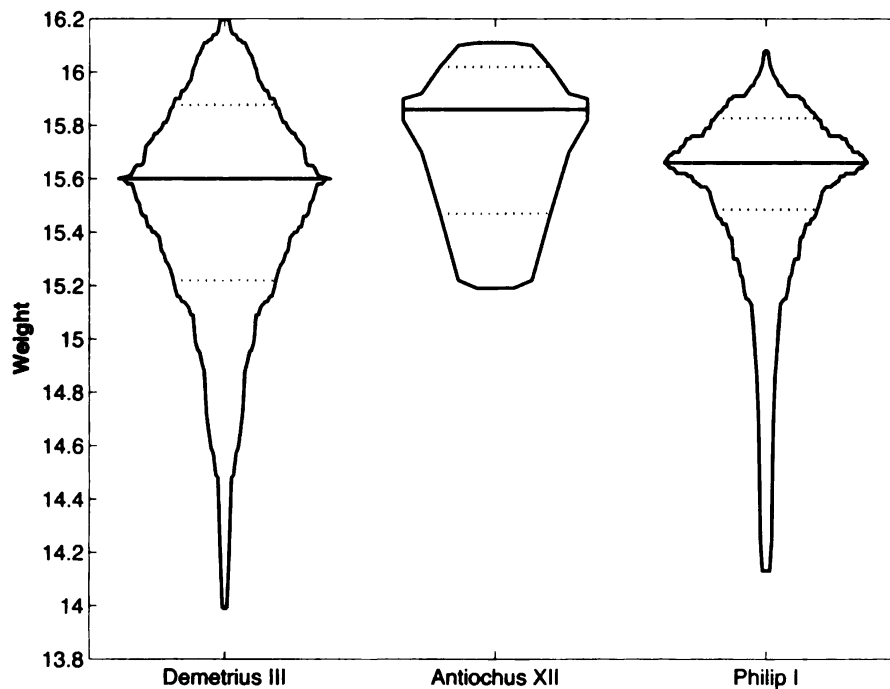


Figure 4. Demetrius III, Antiochus XII and Philip I, box-percentile plots

A comparison of the corpora of Demetrius III, Antiochus XII and Philip I, as seen in Tables 1–2 and Figures 3–4, presents several differences. First, the weight distributions of the coins of Demetrius III and Philip I are characterized by longer left tails than the weight distribution of the coins of Antiochus XII. Also, Demetrius III's distribution has a heavier left tail than Philip I's distribution. The shorter left tail of Antiochus XII's distribution is likely caused by the low number of surviving examples of his coins (this also is likely the reason for the slight bimodality of the estimated density function in Figure 3). The heavier left tail of Demetrius III's distribution can be connected to a lower observable metal quality in the surviving coins, which indicates a greater likelihood for metal losses caused by corrosion and cleaning (depending on the environment in which the coins were deposited).

Second, the weight distribution of Philip I's coins is characterized by a lower variability. The interquartile range is noticeably lower than the interquartile ranges of weight distributions for both Demetrius III and of Antiochus XII. The standard deviation for Philip I is lower than the standard deviation for Demetrius III, but is comparable to the standard deviation for Antiochus XII. Conover's multisample nonparametric test for equal variances<sup>49</sup> rejects the null hypothesis of identical variances at the 95% confidence level (the p-value is less than 0.001). Since the hypothesis was rejected, Conover's multiple comparisons procedure was done to test which pairs of weight distributions differ. The hypothesis of equal variances is rejected for both Demetrius III and Philip I (the p-value is less than 0.001), whereas the differences between the other two pairs are not significant at the 95% confidence level (the p-values for the test of Demetrius III and Antiochus XII, and for the test of Antiochus XII and Philip I, are 0.259 and 0.244, respectively). Thus, the weight distribution of Philip I's tetradrachms is characterized by significantly lower variability than the weight distribution of Demetrius III's tetradrachms. This might suggest a more careful process of flan production in the Antioch mint.

Table 1 further shows that the mean and median of the coins of Antiochus XII are larger than the means and medians of both Demetrius III (the differences are 0.23 g and 0.26 g, respectively) and Philip I (the differences are 0.14 g and 0.20 g, respectively). Figure 5 also shows that the cumulative weight distribution of Antiochus XII is mostly smaller than the cumulative weight distributions of Demetrius III and Philip I.<sup>50</sup> The one-sided Mann-Whitney U test was used to test possible differences between Antiochus XII and Demetrius III, and between Antiochus XII and Philip I.<sup>51</sup> The p-values of 0.069 and 0.062, respectively, are low but they still

49. Conover 1999, pp. 303–4. Note that we use this nonparametric test because of the non-normality of the data (the Lilliefors test rejects the hypothesis of normality at 0.05 significance level for both Demetrius III and Philip I).

50. For each curve, the vertical axis shows the proportion of coins with weights equal or smaller than the value shown at the corresponding point on the horizontal axis.

51. As noted above, the hypothesis of equal variances was not rejected for these pairs. For

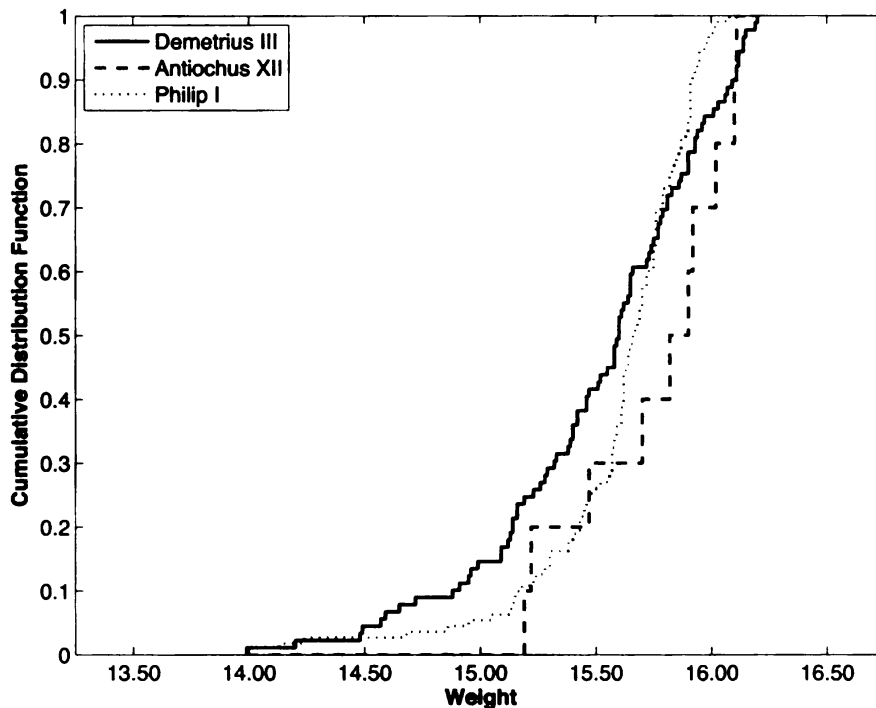


Figure 5. Cumulative weight distributions

do not allow us to reject the hypotheses at the 95% confidence level.<sup>52</sup> Any potential future enlargement of Antiochus XII's corpus may or may not change this significantly. In any case, in our opinion, there is no reason to suppose that a higher weight standard was used by the Damascus mint under Antiochus XII.

The basic statistical characteristics of drachms and hemidrachms of Demetrius III are presented in Table 3.<sup>53</sup>

this reason, we are probably not making a substantial error if we use the Mann-Whitney U test to test the null hypothesis of equal means/medians. However, since it is not completely certain that the distributions have the same shape, we can conservatively interpret this procedure as a test of the hypothesis of identical distributions against the alternative view that Antiochus XII's distribution tends to yield larger observations (see, e.g., Conover 1999).

52. As we simultaneously test two pairs of samples, a significance level lower than 0.05 should be used for the two individual tests to guarantee that the overall type 1 error does not exceed 5%. We use a Bonferroni-adjusted level of significance of  $0.05/2 = 0.025$  to keep the overall confidence level of 95%.

53. The holed hemidrachm (no. 2, 1.73 g) was not excluded and its weight was not modified for the same reasons as those given above in respect to holed tetradrachms. According to the methodology described in footnote 2, the maximum possible error is about  $3.3\% = 0.06$  g (the ratio  $d/D$  is about 0.18).

Table 3. Statistical characteristics of drachms and hemidrachms

	Drachms	Hemidrachms
No. of analyzed coins (of them holed)	5 (0)	3 (1)
Mean	3.76	1.65
Standard deviation	0.08	0.21
Minimum	3.64	1.41
Median	3.78	1.73
Maximum	3.84	1.81

Table 4. Demetrius III, Antiochus XII and Philip I, number of dies

	Demetrius III											Antiochus XII							Philip I	
	Total	Seleucid year										Total	Undat.	Seleucid year						
		216	217	218	219	220	221	222	223	224	225			226	227	228	229	230		
Coins	105	7	28	11	15	0	14	15	4	8	3	12	1	3	4	1	2	1	183	
Recorded dies	25	1	5	3	4	0	2	8	3	2	2	8	1	2	3	1	1	1	120	

**Analysis of obverse dies of tetradrachms.** All obverse die links are identified in our corpora. Annual die statistics are presented in Table 4 (with the exception of Philip I whose coins are not dated).

Demetrius III's obverse die A11 was used both before and after SE 220: five coins are dated SE 219, six coins are dated SE 221 and two coins are dated SE 222.<sup>54</sup> In order to provide a correct estimation of die production in both of Demetrius III's reigns, die A11 was assigned to the year of its first occurrence, SE 219, and coins struck from this die in subsequent years were added to coins struck in SE 219. No coin struck from this die was included in calculations of die production in the period after SE 220.

Table 5 shows basic coin and die statistics. Notice the higher number of Demetrius III's coins known from the period before SE 220 in comparison with the period after SE 220, although more dies are known from the later period.

54. Four of Demetrius III's dies are recorded in more than one year: A6 (SE 217–218), A8 (SE 218–219), A11 (SE 219 and SE 221–222) and A19 (SE 222–223). Similarly, Antiochus XII's die A8 is recorded in two years (SE 229–230).

Table 5. Die statistics and estimates

	Demetrius III			Ant. XII	Ph. I.
	Total	Before SE 220	After SE 220		
<b>Coins in total</b>	105	61	44	12	183
<b>Coins assigned to dies</b>	105	69	36	12	183
<b>Number of dies</b>	25	11	14	8	120
<b>Number of singletons</b>	8	2	6	5	81
<b>Mean number of coins per die</b>	4.20	6.27	2.57	1.50	1.52

Table 6. Die frequencies (numbers of dies represented exactly N times)

N	Demetrius III			Antiochus XII	Philip I
	Total	Before SE 220	After SE 220		
1	8	2	6	5	81
2	5	2	3	2	25
3	3	1	2	1	7
4	2	1	1		5
5					1
6	1		1		1
7	1	1			
8	2	1	1		
9	1	1			
13	1	1			
19	1	1			
<b>Total</b>	<b>25</b>	<b>11</b>	<b>14</b>	<b>8</b>	<b>120</b>

Die frequencies are presented in Table 6. The die frequencies are the numbers of dies represented in the corpora once, twice, three times etc. For example, five of Antiochus XII's dies are represented by one coin (dies A1, A2, A5, A6 and A7), two dies are represented by two coins (dies A3 and A4) and the remaining die is represented by three coins (die A8).

Table 7. Estimates of the coverages and of the original numbers of dies

	Demetrius III			Ant. XII	Ph. I
	Total	Before SE 220	After SE 220		
<b>Number of dies</b>	25	11	14	8	120
<b>Estimated coverage</b>	92.4%	97.1%	83.3%	58.3%	55.7%
<b>95% confidence interval</b>	84.4–100%	90.0–100%	64.9–100%	14.5–100%	45.1–66.4%
<b>Estimated no. of all dies</b>	31	12	20	18	288
<b>95% confidence interval</b>	27–36	11–14	14–29	9–45	222–373

In Table 7, the coverages of the examined groups of coins were estimated via Good's coverage estimator, and 95% confidence intervals were computed via Esty's formula.<sup>55</sup> The coverage of a sample of coins of a given type is the fraction of all produced coins of the given type that are from dies represented in the sample.<sup>56</sup> In other words, the coverage of a sample of coins is the probability that a new coin of that type will be from a die already observed in the sample. It means that 1 minus the coverage is the probability that a new coin would yield a new die. Note that the coverage is a property of the sample, not of the coinage issue.

The coverages of the whole corpus of Demetrius III's tetradrachms, and of its part represented by the period before SE 220, are very high, which is due to the low number of singletons with respect to the number of coins. Moreover, the high numbers of high die frequencies in the period before SE 220 may indicate that the data are not random in the sense that each coin entered the sample independently with equal likelihood. It is possible that coins from the same die stayed grouped together from the time they were produced, hoarded, and eventually found. Therefore we cannot be sure that Good's estimator gives reliable results; the estimated coverages should thus be taken cautiously, even if this estimator is considered to be reasonably robust (Esty 2006, 362; Esty 1986, 197). We cannot exclude the possibility that real coverages of the whole corpus of Demetrius III's tetradrachms and of its part represented by the period before SE 220 are in fact much lower. The estimated coverages of the period after SE 220, and especially of the corpus of Antiochus XII, should also be taken cautiously because the samples are small (see the 95% confidence intervals).<sup>57</sup>

The last two rows of Table 7 show the estimates of the original numbers of all dies using the methodology described in Esty (2006),<sup>58</sup> which is based on the assumption that the number of coins produced by a random die has a negative

55. Esty 2006, pp. 359–360, formulae (1) and (5). See also Esty 1986, p. 208.

56. That is, the coverage is the fraction  $M/N$  where  $M$  is the number of all coins originally struck by the dies that are observed in the sample and  $N$  is the number of all produced coins struck by all dies.

57. Esty's (2006, 362) formula (5) for the confidence interval works well as long as the sample size is at least 30 coins. Note that Esty elsewhere (1986, 208) recommends a slightly more accurate coverage estimate for small random samples (formula J2). This formula gives nearly identical results (the differences are at most 0.5%) with the exception of Antiochus XII's sample for which it gives a higher coverage estimate of 61.4% with the 95% confidence interval of 17.5% to 100%.

58. Esty (2006, 359–360) formulae (2) and (4). The formula (2) is equivalent to Esty (1986) formula H5 (p. 205) where the equal-output estimate  $k'$  is computed by the formula K1 (p. 209). The formula (4) for the confidence interval is a simplified version of Esty (1986) formula C2 (p. 201). Formula C2 gives nearly identical results with the exception of Antiochus XII's sample for which it gives a broader 95% confidence interval of 7 to 49 dies.

binomial distribution. The negative binomial family is a two-parameter family, but only one of these two parameters, the so-called shape parameter, is necessary for the Esty estimate. We set this parameter equal to 2 as is recommended by Esty and Carter (1991–2) and by Esty (2006).<sup>59</sup>

The estimated die production of Antiochus XII is comparable with the estimated die production of Demetrius III in the period after SE 220, which lasted approximately the same amount of time. It contrasts with the lower estimated die production of Demetrius III in the period before SE 220 because nearly 60% of his coins in the corpus (61 of 105) come from this early period. Nevertheless, no significant conclusion can be made from these observations because of the possible non-randomness of Demetrius III's sample discussed above, and because of the small size of the sample of Antiochus XII (see the broad confidence interval). It is also necessary to emphasize that the estimates do not take into account dies that broke almost immediately when first used and thus produced relatively few coins (see Esty 2006). In any case, Table 7 shows the much greater activity of the Antioch mint, even when the longer period of Philip I's reign is taken into consideration.<sup>60</sup>

## CONCLUSIONS

1. Demetrius III's tetradrachms were struck on the same weight standard both before and after SE 220.
2. The surviving coins of Demetrius III are characterized by significantly higher weight variability with respect to the surviving coins of Philip I from the Antioch mint.
3. The coin production of the Damascus mint under Demetrius III and Antiochus XII was much less intensive than the coin production of the Antioch mint under Philip I.

59. If the numbers of coins produced by individual dies have a negative binomial distribution with a given shape parameter, then the observed numbers of coins per die in a truly random sample have a zero-truncated negative binomial distribution with the same shape parameter (the second parameter is a function of the original second parameter and of the survival rate). The chi-squared goodness-of-fit test was used for the whole sample of Demetrius III's dies, and for the sample of Philip I's dies, in order to verify that the recommended choice of the shape parameter does not contradict our data. The null hypothesis that the shape parameter is equal to 2 was not rejected (we omit details for the sake of brevity). The small numbers of dies produced in Damascus before SE 220, after SE 220 and under Antiochus XII do not allow us to verify the validity of the recommended choice via the chi-squared goodness-of-fit test (as the second parameter of the negative binomial distribution is unknown, it is necessary to divide data into at least three bins with sufficient numbers of observations).

60. Probably 88/7–c. 75 BC, see Hoover 2007.



CATALOGUE  
 DEMETRIUS III (97/6–88/7 BC)  
 Tetradrachms

*Obv.* Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r.; ΦΙΛΟΠΑΤΟΡΟΣ ΕΩΤΗΡΟΣ in two lines on l.; cult image of Atargatis standing facing with arms extended, holding flower, grain stalk rising from each shoulder.

CIƷ (SE 216 = 97/6 BC); in l., field, ⚡; above, Ξ; in ex, to r., ⚡; SC 2450.1

Die A1; obv. link to P5, below.

- |      |    |       |  |
|------|----|-------|--|
| 1.A1 | P1 | 15.81 | CSE 858.   |
| 2.A1 | P1 | 15.96 | Ariadne 9 Dec. 1981, 293.                                      |
| 3.A1 | P1 |       | Spink <i>NCirc</i> Apr. 2001, GK0165. Doublestruck on reverse. |
| 4.A1 | P2 | 15.32 | SNG Spaer 2825.  |
| 5.A1 | P3 | 15.73 | GM 64, 11 Oct. 1993, 221.                                      |
| 6.A1 | P4 |       | Cast in Paris (Van Lesser).                                    |

In l., field, ⚡; above, ⚡; SC 2450.2

Die A1; obv. link to P1–4, above.

- |      |    |       |                                    |
|------|----|-------|------------------------------------|
| 7.A1 | P5 | 16.14 | MuM Deutschland 27 March 1998, 10. |
|------|----|-------|------------------------------------|

IIƷ (SE 217 = 96/5 BC); in l., field, ⚡; above, N; SC 2450.3

Die A2

- |      |    |       |   |
|------|----|-------|---|
| 8.A2 | P6 | 15.40 | Auctiones 8, 359=Sotheby's Zurich=GM 67, 2 May 1994, 341. |
| 9.A2 | P7 | 15.58 | Berk 83, 26 Oct. 1994, 236=MuM FPL 239, Jan. 1964, 24.    |

Die A3

- |       |    |       |                         |
|-------|----|-------|-------------------------|
| 10.A3 | P8 |       | Paris, inv. H859 (616). |
| 11.A3 | P8 | 15.74 | Paris, inv. 1973.1.251. |

Die A4; obv. link to P13–P16, below.

- |       |     |       |  |
|-------|-----|-------|--|
| 12.A4 | P9  | 15.58 | LSM 116a=Naville 10, 1553.                                 |
| 13.A4 | P10 | 16.12 | CSE 859=GM 90, 12 Oct. 1998, 476 = GM 89, 5 May 1998, 274. |
| 14.A4 | P11 | 16.14 | Berk 124, 3 Jan 2002, 214.                                 |
| 15.A4 | P12 | 15.16 | GM 36, 8 Apr. 1987, 290.                                   |

In l., field,  $\Delta$ ; above, N; SC 2450.4

Die A4; obv. link to nos. P10–P12, above.

16.A4	P13	15.46	LSM 116 $\beta$ =ANS 1944.100.78009. Control mostly off flan
17.A4	P14	15.59	Naville 10, 1552.
18.A4	P15	16.11	Paris. Babelon 1567. Date off flan
19.A4	P15		Berk 58, 28 Jun. 1989, 180.
20.A4	P16	15.60	Time Machine (Vcoins.com), 39121.

In l., field,  $\Delta$ ; above,  $\hat{\kappa}$ ; in ex, to r.,  $\text{H}$ ; SC 2450.5

Die A5

21.A5	P18		B. Bowlin col., Mississippi. Obv. doublestruck.
-------	-----	--	---

Die A6; obv. link to P29–P35, below.

22.A6	P19	15.77	London. BMC 1. $\text{I}$ written as $\text{E}$ in date.
23.A6	P19	15.62	CNG 15 Sep. 1999, 563. Obv. doublestruck
24.A6	P19	15.23	Leu 22, 8 May 1979, 167 =Leu 13, 30 Apr. 1975, 310.
25.A6	P20	14.65	SNG Spaer 2826.Holed.
26.A6	P21	15.19	LSM 115 $\beta$ =Künker 94, 27 Sep. 2004, 1435=Auctiones 20, 484 = Helbing 8, Nov. 1928, 4084. Lower l. control off flan. Oblate flan.
27.A6	P22	15.33	NFA 1, 20 Mar. 1975, 213.
28.A6	P23	15.64	LSM 115 $\beta$ = ANS 1944.100.78008.
29.A6	P24	15.47	Peus 372, 30 Oct 2002, 569=Cahn 71, 14 Oct. 1931, 557.
30.A6	P25		Paris, inv. Y614 (1562a). Cut on Demetrius' neck. Rev. defaced by many cuts.
31.A6	P26	14.49	Uncertain Ebay sale, 1998.
32.A6	P27	15.29	Edward Waddell, stock, Feb. 8, 2003.
33.A6	P28	14.95	Ebay sale, Jan. 18, 2000, 235597466.

In l., field,  $\Delta$ ; above,  $\hat{\kappa}$ ; in inner r. field, STAR.; SC 2450.6a

Die A6; obv. link to P19–28, above, and P30–P35, below.

34.A6	P29		Cast in Paris (PAM 12). Holed.
-------	-----	--	--------------------------------

In l., field,  $\Delta$ ; above,  $\hat{\kappa}$ ; in inner r. field, STAR; SC 2450.6b

Die A6; obv. link to P19–P28, above, and P31–P35, below.

35.A6	P30	15.14	Cast in Paris (Haddad 5). Holed.
-------	-----	-------	----------------------------------

$\text{HIE}$  (SE 218 = 95/4 BC); in l., field, N; above,  $\Delta$ ; in ex, to r.,  $\text{H}$ ; SC 2450.7

Die A6; obv. link to P19–30, above.

36.A6	P31		Cast in Paris. Holed.
37.A6	P32	16.12	Paris, inv. R2274. Holed.
38.A6	P33	15.55	Auctiones 16, 246. Date and lower control illegible.

330 OLIVER D. HOOVER, ARTHUR HOUGHTON, AND PETR VESELÝ

39.A6 P34 15.97 LSM 119γ= London. BMC 2. Date and lower control illegible.

40.A6 P35 15.40 Ancient Imports, online sale 2007.

Die A7

41.A7 P36 15.81 CSE 860.

42.A7 P37 15.16 LSM 119β=Glasgow. *Hunter* III, 1.

43.A7 P38 15.94 B. Bowlin coll., Mississippi.

44.A7 P39 15.51 Jean Elsen 93, Dec. 15 2007, lot 386=Auctiones 18, 21 Dec. 1989, lot 849.

Die A8; obv. link to nos. 42–47, below.

45.A8 P40 16.20 CNG 61, 25 Sep, 2002, 857.

46.A8 P41 15.90 SNG Copenhagen 420.

ΘΙΕ (SE 219 = 94/3 BC); in l., field, N; above,  $\overline{\Lambda}$ ; in ex, to r.,  $\overline{\Pi}$ ; SC 2450.8

Die A8; obv. link to P40–P41, above.

47.A8 P42 15.93 CNG 51, 15, Sep. 1999, 564.

48.A8 P43 14.99 Lanz 125, 483.

49.A8 P44 15.58 LSM 123β= London. BMC 3.

50.A8 P45 15.77 LSM 123γ=Naville 10, 1554.

51.A8 P46 15.26 SNG Spaer 2854.

52.A8 P47 16.01 Berk 125, 27 Feb. 2002, 198.

In l., field, N; above,  $\overline{\Pi}$ ; SC 2450.9

Die A9

53.A9 P48 15.72 ACNAC 6 (Dewing) 2646.

54.A9 P49 15.28 Hirsch 168, 22 Nov. 1990, 350. Controls and date of flan.

55.A9 P50 15.66 CSE 2, 799.

*Obv.* Diademed head of Demetrius III r., with thick curly beard, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r.; ΦΙΛΟΠΑΤΟΡΟΣ ΕΩΤΗΡΟΣ in two lines on l.; cult image of Atargatis standing facing with arms extended, holding flower, grain stalk rising from each shoulder.

ΘΙΕ (SE 219 = 94/3 BC); in l., field, N; above,  $\overline{\Lambda}$ ; in inner r. field,  $\Delta$ ; SC 2451.1

Die A10

56.A10 P51 14.20 SNG Spaer 2853. Lower control described as  $\Lambda$ .

Die A11; obv. link to P53–P58 and P69–70, below.

57.A11 P52 Cast in Paris (181; Gris 19).

58.A11 P52 16.07 Paris, inv. 1973.1.252.

In l., field, N; above,  $\Delta$ ; SC 2451.2

Die A11; obv. link to P52, above, and 55–58 and 69–70, below.

59.A11	P53	15.12	Paris. Babelon 1568.
60.A11	P54	15.75	Berk 126, 23 Apr. 2002 102=Berk 124 3 Jan. 2002 215.
61.A11	P54	14.96	Sternberg 8, 16 Nov. 1978, 193 = Superior, 8 Dec. 1993 (Abramowitz), 382=Hirsch 186, 10 May 1995, 537=Hirsch 190, 8 May 1996, 427=Hirsch 192, 27 Nov. 1996, 314.

$\kappa\xi$  (SE 220 = 93/2 BC); currently no specimens of this date are known.

$\Delta\kappa\xi$  (SE 221 = 92/1 BC); in l., field, N; above,  $\Delta$ ; SC 2451.3

Die A11; obv. link to P52–54, above, and P69–70, below.

62.A11	P55	15.83	SNG Spaer 2865.
63.A11	P56	16.11	LSM 126f=Hess, 18 Dec. 1993, 120=Naville 10,1555.
64.A11	P57	15.90	Spink America, 7 Dec. 1995, 2188=Noble 54, 22 Jul. 1997, 1766.
65.A11	P58	16.03	Spink, NumCirc, Aug. 2003, GK0610.
66.A11	P59	15.61	Zurqieh (vcoins.com), 370.
67.A11	P60	14.91	Eukratides (vcoins.com).

In l., field, N; above,  $\Delta$ ; in ex, to r.,  $\Delta$ ; SC 2451.4

Die A12

68.A12	P61	15.60	SNG Spaer 2862.
69.A12	P62	15.42	LSM 126γ=London, inv. 4-3-125=Naville 10, 1556.
70.A12	P63	12.96	LSM 126δ=ANS 1944.100.78014. Corroded.
71.A12	P64	15.13	Superior, 8 Dec. 1993 (Abramowitz), 383=Meyers 12, 4 Dec 1975, 258=Glendining, 4 Oct. 1957, 192.
72.A12	P65	15.14	LSM 126ε=ANS 1944.100.78015.
73.A12	P66		Kricheldorf, 7 Oct. 1957, 379.
74.A12	P67	15.42	Jean Elsen 91, Mar. 24, 2007, 139=Leu 74, 19 Oct. 1998, 263.
75.A12	P68		MuM FPL Jun/Jul. 1956, 13+Gans, 4 May 1955, 187.

$\beta\kappa\xi$  (SE 222 = 91/0 BC); in l., field, N; above,  $\Delta$ ; SC 2451.5

Die A11; obv. link to P46 and P47–P52, above.

76.A11	P69	15.86	Paris, inv.1973.1.249.
77.A11	P70	15.09	MuM 51, 19 Jun. 1975, 221=MuM FPL 256, Jul.–Aug. 1965, 49.

In l., field, N; above, Ě; SC 2451.6

**Die A13**

- 78.A13 P71 15.09 LSM 127=Naville 10, 1557.  
 79.A13 P72 15.65 Triton VI, 15–16 Jan. 2003, 466.  
 80.A13 P73 Cast in Paris (182).  
 81.A13 P74 15.79 Paris, inv. 1973.1.253.

**Die A14**

- 82.A14 P75 15.52 Brussels. De Hirsch 1726.

**Die A15**

- 83.A15 P76 15.46 Beirut. American University.

**Die A16**

- 84.A16 P77 16.19 Spink stock, Dec. 13, 2002, GK0554.  
 85.A16 P78 MuM FPL 388, Apr. 1977, 21.  
 Die A17; obv. die link with P80–P81, below.

- 86.A17 P79 15.38 NFA 20, 9 Mar. 1988, 803.

In l., field, N; above, A; in ex, to r., H; SC 2451.7

Die A17; obv. die link with P79, above.

- 87.A17 P80 14.72 Superior, 11 June 1986 (Grove–Grover)=Malloy, 15  
 Mar. 1974, 180.  
 88.A17 P81 14.88 CNG 61, 25 Sep. 2002, 858.

**Die A18**

- 89.A18 P82 15.78 GM 125, Oct. 13, 2003, 254.

Die A19; obv. die link with P84–P85, below.

- 90.A19 P83 15.39 Cast in Paris (Cahn).

ΓΚΕ (SE 223 = 90/89 BC); in l., field; N; above, Ě; SC 2451.8

Die A19; obv. die link with P83, above.

- 91.A19 P84 14.57 NFA 6, Feb 27 385.  
 92.A19 P85 15.90 Berk 139, 4 Aug 2004, 194.

In l., field, N; above, Δ; in ex, to r., H; SC 2451.9

**Die A20**

- 93.A20 P86 16.06 LSM 128=London. BMC 4.

**Die A21**

94.A21 P87 13.99 Hirsch 173 19 Feb 1992, 492.

ΔΚΞ (SE 224 = 89/8 BC); in l., field, Ν; above, Ε̃; SC 2451.10

**Die A22**

95.A22 P88 15.60 SNG Spaer 2866.

96.A22 P89 16.09 Paris, inv.1973.1.250.

In l., field, Ν; above, Α̃; in ex, to r., Η; SC 2451.11

**Die A23**

97.A23 P90 15.65 CNG 67, 905. Pellet on nose.

98.A23 P91 16.15 Triton 8, 551. Pellet on nose.

99.A23 P92 14.59 CNG 76, Sept. 12, 2007, 800. Pellet on nose.

100.A23 P93 15.65 Paris. Babelon 1569. No pellet on nose; pellet to lower l. of Atargatis; holed.

101.A23 P94 14.48 Holyland Numismatics (vcoins.com), 733. No pellet on nose; pellet at r. end of ex. Line.

102.A23 P95 15.87 Tom Vossen (vcoins.com), 4870. No pellet on nose; pellet to l. of Atargatis.

ΕΚΞ (SE 225 = 88/7 BC); in l., field, Ν; above, Α̃; in ex, to r., Η; SC 2451.12

**Die A24**

103.A24 P96 LSM 130=Cambridge, Leake coll.

104.A24 P97 Berk 58, 28 Jun. 1989, 181.

In l., field, Ν; above, Ε̃; SC 2451.12

**Die A25**

105. A25P96 15.93 CNG 76, Sept. 12, 2007, 801. Somewhat crude style.

**Dubious tetradrachms**

CIΞ (SE 216 = 97/6 BC); in l., field, Α̃; above, Ξ; in ex, to r., Η

**Die A1**

1. A1 P1 18.15 Argenor, 3 May 2006, 182.

ΔΚΞ (SE 224 = 89/8 BC); in l., field, Ν; above, Ε̃, in ex, to r., Η

**Die A2**

2. A2 P2 12.47 GM 117, 14 Oct 2003, 327.

**Drachms**

*Obv.* Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r.; ΦΙΛΟΠΑΤΟΡΟΣ ΕΥΤΗΡΟΣ in two lines on l.; Nike advancing l., holding palm branch and crowning final royal epithet with wreath, dotted border..

ΖΙΕ (SE 217 = 96/5 BC); in outer l. field, Δ

SC 2452.1; Die A1

- |       |    |      |  |
|-------|----|------|--|
| 1. a1 | p1 | 3.78 | Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 2=SNG Spaer 2827.            |
| 2. a1 | p2 | 3.83 | Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 1=CSE 2, 800.                |
| 3. a1 | p2 | 3.64 | Kovacs (vcoins.com).   |
| 4. a1 | p3 | 3.84 | Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 3=Spink 65, 5 Oct. 1988, 89. |

ΗΙΕ (SE 218 = 95/4 BC); in outer l. field, Δ

SC 2452.1; Die A2

- |       |    |      |                                |
|-------|----|------|--------------------------------|
| 5. a2 | p4 | 3.71 | B. Nelson coll, Lancaster, PA. |
|-------|----|------|--------------------------------|

**Hemidrachms**

*Obv.* Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r.; ΦΙΛΟΠΑΤΟΡΟΣ ΕΥΤΗΡΟΣ in two lines on l.; diadem with ends downward, dotted border.

Undated; between diadem ends, Δ ; SC 2453

Die A1

- |       |    |      |   |
|-------|----|------|---|
| 1. a1 | p1 | 1.81 | SNG Spaer 2828; Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 4.        |
| 2. a1 | p1 | 1.73 | SNG Spaer 2829; Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 5. Holed. |
| 3. a1 | p1 | 1.41 | SNG Spaer 2830; Houghton and Spaer <i>SM</i> 157 (Feb. 1990), p. 2, no. 6.        |

# ANTIOCHUS XII

(87/6–84/3 BC)

## Tetradrachms

*Obv.* Diademed head of Antiochus XII r., *beardless*, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΕΠΙΨΑΝΟΥΣ in three lines on r.; ΠΙΛΟΠΑΤΟΡΟΣ ΚΑΛΛΙΝΙΚΟΥ in two lines on l.; cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts; laurel wreath border.

Undated (SE 226 = 87/6 BC)?; in outer l. field, ☩; SC 2471.1

### Die A1

- |       |    |       |   |
|-------|----|-------|---|
| 1. A1 | P1 | 15.19 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 7=LSM 134=Egger 45, Nov. 1913, 746=Jameson 2361. |
|-------|----|-------|---|

CKE (SE 226 = 87/6 BC); in ex., to l. of date, ☩; SC 2471.2

### Die A2

- |       |    |       |  |
|-------|----|-------|--|
| 2. A2 | P2 | 15.47 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 1=LSM 132=London. <i>BMC</i> 2. |
|-------|----|-------|--|

### Die A3

- |       |    |       |  |
|-------|----|-------|--|
| 3. A3 | P3 | 15.90 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 2=Paris, Seyrig coll. |
| 4. A3 | P4 | 16.11 | CSE 2, 816. Date written as CKΓ.   |

ZKE (SE 227 = 86/5 BC)

In outer l. field, ☩; in ex., to l. of date, Λ; SC 2471.4a

### Die A4

- |       |    |       |  |
|-------|----|-------|--|
| 5. A4 | P5 | 15.22 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 4=Paris, Seyrig coll. |
| 6. A4 | P6 | 16.02 | Berk 124, Jan. 3, 2002, lot 216.   |

### Die A5

- |       |    |       |  |
|-------|----|-------|--|
| 7. A5 | P7 | 15.82 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 5=CSE 2, 816. |
|-------|----|-------|--|

In outer l. field, ☩; in ex., to l. of date, Λ; SC 2471.4b

### Die A6

- |       |    |       |  |
|-------|----|-------|--|
| 8. A6 | P8 | 15.70 | Houghton and Spaer <i>SM</i> 157 (Feb 1990), p. 4, no. 3=LSM 134=Imhoof–Blumer, <i>Monnaies grecques</i> (Amsterdam, 1883), p. 47, no. 121. Date written as ΣΚΞ. |
|-------|----|-------|--|



*Obv.* Diademed head of Antiochus XII r., with short curly beard, diadem ends falling straight behind, fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΕΠΙΘΑΝΟΥΣ in three lines on r.; ΦΙΛΟΠΑΤΟΡΟΣ ΚΑΛΛΙΝΙΚΟΥ in two lines on l.; cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts, laurel wreath border.

ΗΚΕ (SE 228 = 85/4 BC); in outer l., field,  $\overline{\text{M}}$ ; above,  $\Lambda$ ; SC 2472.1

Die A7

9.A7 P9 13.10 Houghton and Spaer SM 157 (Feb 1990), p. 4, no.6=CSE 864=NFA 18, 31 Mar. 1987, 401.

ΘΚΕ (SE 229 = 84/3 BC); in outer l., field,  $\overline{\text{M}}$ ; above,  $\Lambda$ ; SC 2472.2

Die A8

10.A8 P10 16.10 Triton VI, 15–16 Jan. 2003, 467.

11.A8 P11 15.92 CSE 2, 817. Date written as CKΓ.

*Obv.* Diademed head of Antiochus XII r., with short curly beard, diadem ends falling straight behind; fillet border.

*Rev.* ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΔΙΟΝΥΣΟΥ in three lines on r.; ΕΠΙΘΑΝΟΥΣ ΦΙΛΟΠΑΤΟΡΟΣ ΚΑΛΛΙΝΙΚΟΥ in two lines on l.; cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts; laurel wreath border.

ΑΞ (SE 230 = 83/2 BC); in ex, to l. of date,  $\Delta^k$ ; to r. of date,  $\overline{\text{N}}$ ; SC 2472A

Die A8

12.A8 P12 15.71 CNG

## Tigranes IV, V, and VI: New Attributions

PLATES 81–82

FRANK L. KOVACS\*

The author considers a number of coins traditionally attributed to Tigranes the Great, Tigranes III, Tigranes IV, and Tigranes V with respect to their legends and the detail of their portraits, and reassigns/reattributes them to the reigns of Tigranes IV, Tigranes IV with Erato, Tigranes V (Herodian Tigranes I), and Tigranes VI (Herodian Tigranes II). New examples of previously known coins also permit new readings and interpretations of designs.

The problems of attributing coins in the ancient Armenian series are largely due to the number of specimens that are badly preserved, worn, or poorly struck to begin with. Many such coins are also very rare, which only heightens the desire of numismatists to place them in the series. Such efforts yield understandably problematic results.

In attempting to catalogue the coinage of the last three kings of Armenia named Tigranes, numerous inconsistencies become apparent. Some coins with similar portraits have been given to different kings, some coins given to the same king have different portraits, and some reigns that one might expect to be represented by coins are not. Complicating the attribution of Armenian coins is the number of kings named Tigranes: six or perhaps seven, depending on how one counts.<sup>1</sup>

\*frank@frankkovacs.com

1. The question of numbering the Armenian kings named Tigranes depends on whether Tigranes the Great is I or II. See Foss (1986a, 48; 1986b, 64–66) for another Tigranes (a son of Tigranes the Great) who is never given a number, although he was king.

The subjects of this article are the coinages of Tigranes IV (8–5 BC and c. 2 BC), an Artaxiad; Tigranes V (c. AD 6–12), grandson of Herod the Great; and Tigranes VI (AD 60–62), great-grandson of Herod the Great. As there are no surviving portraits apart from those on coins, and as the coin inscriptions do not usually include additional names or titles to distinguish one Tigranes from another, one must rely on a detailed comparison of the numismatic evidence. Only on the coins of Tigranes IV and his sister-queen Erato, the last two native Artaxiad rulers of Armenia (*RPC* I, 3841–3842), are inscriptional clues found, but their interpretation and attribution are still debated.<sup>2</sup> With better preserved and more legible examples coming to light, it is a good time to reconsider some of the attributions made by Bedoukian in *CAA*, Nercessian in *ACV*, and Mousheghian in *HRAC*.

In a radical departure from the traditional attributions of Armenian coins, this article argues that all coins previously attributed to Tigranes and Erato belong to Tigranes IV, the coins with bearded portraits generally attributed to Tigranes IV should be divided between Tigranes V and VI, and various other (misattributed) coins should be reassigned to the three kings discussed here.

### TIGRANES IV, FIRST REIGN (PRO-PARTHIAN) c. 8–5 BC

1. *Æ* 20.<sup>3</sup> *ACV* 150; *CAA* -.

*Obv.*: Bust of beardless king r., wearing a five-pointed tiara decorated with a star of ten rays, below which a row of six small pyramidal decorations.<sup>4</sup>

The tiara is tied with a diadem, and around his neck is a torque.

*Rev.*: ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΟΥ ΤΙΓΡΑΝΟΥ; horse l., right foreleg raised.

\*a) *ALMA* 99.2551, 5.33 g (ex PB coll = Bedoukian 1987, 12–13 = *ACV* 150); \*b) SK; c) FK 6.35 g.

2. *Æ* 17. *ACV* 153; *CAA* 140.

*Obv.*: As last.

*Rev.*: Same legend; forepart of horse l.

2. Discussion persists as to whether the Tigranes associated with Erato is III, IV, or V. In *RPC* I (571), the authors argue against Bedoukian's attribution to Tigranes V but stop short of resolving the issue in favor of Tigranes III. (Why not Tigranes IV?)

3. Denominations: The diameter cited at the beginning of each entry is of the specific example in the photo plate and is not an average diameter. I have declined to use the denominations suggested in the various references to date, which are sometimes inconsistent. The subject of denominations deserves a separate study, which can only be accomplished after all coins are placed in their proper series and chronological order.

4. It is not clear what is intended by this design element; perhaps mountains, or perhaps they echo the pyramidal crenellations on earlier Achaemenid crown (for which see P. Calmeyer, "CROWN. In the Median and Achaemenid Periods," in *Encyclopaedia Iranica* 6, p. 407, figs. a–d).

\*a) ALMA 99.2538, 4.1 g (ex PB coll. = CAA 140 = ACV 153); b) CNG 36 (1995) 623, 4.98 g.

The initial coinage for Tigranes IV is from his short-lived pro-Parthian reign. Previously known from a single example (1a), there are now two more examples, 1b and 1c, which provide details of the bust missing from the first. Of note on example 1b is a torque around the king's neck. This typically Parthian adornment finds precedent in the short joint reign coinage of Artavasdes II and his son Artaxias II, when supported by the Parthians against Mark Antony (34 BC).<sup>5</sup> Example 1b also shows the lappet of Tigranes's tiara swept back over his shoulder rather than hanging straight down as on the coins of Tigranes II and III, or worn up, off the ear, as in the coins of Artavasdes II and Artaxias II. This treatment of the lappets, along with the additional design elements mentioned above, set this type apart from the coins of Tigranes III, to whom it has been attributed by Bedoukian.

Parthian influence is also evident on the reverse of this issue. The square (actually, three-sided) arrangement of the legend and the standing horse are both among the criteria discussed by Bedoukian in identifying the pro-Parthian coinage of Tigranes III (CAA, 32–33). All of the coins included in this, Bedoukian's "Second Period," employ the title ΘΕΟΥ. When Bedoukian (1987, 12–13) first published this type, he commented on a number of details that were inconsistent with the other coins of Tigranes III's Parthian period: the lack of the title ΘΕΟΥ, the three- rather than four-sided legend, and the youthful portrait. Bedoukian dealt with these inconsistencies by suggesting that this coin represented a "transitional" coinage, despite his having already attributed a coin of essentially the same types, which met all his criteria (CAA, 144), to Tigranes III's "Second Period."

It seems clear that Bedoukian's observed inconsistencies argue more effectively against his attribution to Tigranes III than for it, especially the youthful portrait, which cannot logically make its debut in the middle of the reign of a mature king. Thus, the preferred attribution for the youthful portrait is to his son, Tigranes IV, where it is expected for his pro-Parthian coinage and for his second reign, which followed soon afterward.

The second denomination (horse protome) is identical in portraiture to no. 1, and appears to be three-quarters or two-thirds of the larger. However, a broader sampling of the weights of both would be needed to establish the correct relationship.

### TIGRANES IV, SECOND REIGN (PRO-ROMAN) WITH ERATO, c. 2 BC

3. Æ 27. ACV 184; CAA 167; RPC I, 3841.

*Obv.*: ΒΑΣΙΛΕΥΣ ΜΕΓΑΛ ΝΕΟΚ ΤΙΓΡΑΝΗC; draped bust of beardless king r.,

5. For previously unidentified coins of Artaxias II, see Kovacs (2004), 84–85.

wearing tiara decorated with a star of eight rays; the lappets being worn up across the front of the tiara, which is tied with a diadem.

*Rev.*: KAICAP ΘEOC ΘEOY YIOC CEBACTOC; head of Augustus I.

\*a) HMA 19878/6, 15.03 g, Artaxata excavations 1981.

4. Æ 22. ACV 182–183; CAA 165–166;<sup>6</sup> RPC I, 3842.

*Obv.*: As last.

*Rev.*: EPATW BACIAEΩC TIGPANOY AΔEΛΦH; draped bust of Erato I.

\*a) Glasgow = RPC I, 3842.1, 6.96 g.

5. Æ 19. ACV 122; CAA 128.

*Obv.*: Ψ ..... EMEΓAC C ..... (5a); Ψ .... EME C ... TIGPAN (5d); draped jugate busts of Tigranes and Erato r., Tigranes wears a tiara with five points, decorated with a star (?), the lappets are worn up, exposing his ear(s), and the tiara is tied with a diadem; Erato does not appear to be crowned; beaded border.

*Rev.*: ΦΙΛΟΚΑΙCΑ[P]; the two peaks of Mount Ararat;<sup>7</sup> in exergue: A; beaded border.

\*a) FK, 6.35 g; Kovacs 2004, 84 no. 122;<sup>8</sup> b) Gökyıldırım 2005, 38 no. 382, 2.62 g;<sup>9</sup> c) Etterich 2005, 73 and pl. 8; \*d) SK AE 18, 4.61 g.

Tigranes's pro-Roman coinage exhibits the characteristics typical of eastern kings coming to terms with Rome. On the largest denomination (3), the coin is shared equally by portraits of Tigranes and Augustus, for which there is precedent on the coins of Zenodorus, tetrarch of Chalcis, 32/31 BC (RPC I, 4774) and 27/26 BC (RPC I, 4775), as well as others.<sup>10</sup> On the second denomination (4), Tigranes's sister-queen appears on the reverse, her depiction is much like that of contempo-

6. CAA 165–166 are actually one type, not two, as explained in the comment after RPC I, 3842.

7. For a drawing of Mt. Ararat seen from the Araxes Valley, see de Morgan (1965), 65.

8. I there described this coin as Tigranes V and Erato, merely to associate it with the other coins of Tigranes and Erato under their traditional attribution as a matter of convenience. Formerly attributed by Bedoukian (CAA, 128) to Tigranes II, mint of Caesareia, based on the expansion of the incomplete legend ...ICAP... as KAICAPEΩN.

9. A single example is published in a hoard of 387 coins seized in commercial transit. The excellent color photos, however, show a variety of patinas and earthen concretions, which suggest an accumulation rather than a hoard. Thus assumptions drawn from this hoard should be made with appropriate caution. Coin 382 is attributed by the author to the co-regency of Tigranes the Great and Tigranes the Younger, c. 70–66 BC, which is clearly unsupportable given the now readable legend "Philokaisar."

10. See also RPC I (1866–1880) for Augustus with various kings of Bosphorus; and of particular interest RPC I (Supplement I, 5419/3), showing Augustus with an unidentified eastern king.

rary Roman ladies, draped and with hair ending in a bun at the back of the head.<sup>11</sup> The third coin type (5) combines the jugate busts of Tigranes and Erato on the obverse with the unprecedented reverse type of the two-peaked Mount Ararat as it would have been seen from the capital city of Artaxata, above which is the legend "Philokaisar." Other such declarations of friendship for Rome or for Roman *princes* can be found on the coins of Tarcondimotus of Cilicia, c. 39–31 BC, who calls himself "Friend of Antony" (RPC I, 3871); on the coins of Brogitarus of Galatia, 58–? BC, who uses "Friend of the Romans" (SNG BN, 2336); and on the coins of Mithradates II of Commagene, 36–20 BC, who employs the most politically versatile version, ΦΙΛΟ (Alram 1986, no. 248).

Also deserving of comment is a subtle but powerful suggestion of Rome's primacy on Tigranes's coinage (no. 5 above). The letter A in the exergue, which is almost certainly intended as the regnal year 1, implies that Tigranes's earlier reign under the Parthian aegis was illegitimate and that Rome alone had the right to crown the king of Armenia. This same phenomenon recurs in the reign of Nero, who caused coins to be struck for Tiridates's second reign, dated regnal year one = AD 66 (Kovacs 2005/6, 105–110), despite an earlier reign of five or six years (AD 54–60).

The three coin types of Tigranes IV and Erato are all rare, as would be expected for such a short reign, and leave little room for the additional coins attributed by Bedoukian to Tigranes IV (CAA, 148–159 and, with Erato, 161–162). There are three reasons why the latter should be placed elsewhere. First, the types are too many, and the surviving examples too numerous to reflect such a short reign. Second, the portraits for all these types show a bearded king, not the youthful son of Tigranes III who, as Kokkinos suggests, did not reign long enough to employ both a beardless and a bearded portrait.<sup>12</sup> And third, a close examination of the bearded portrait coins reveals two distinctly different renditions of the royal dress, which strongly suggests that two different kings are represented, as will be discussed below.

### TIGRANES V (I, HERODIAN), AD c. 6–c. 12.

6. Æ 20. ACV 158–160; CAA 153–154.<sup>13</sup>

*Obv.*: Draped bust of the king r., bearded, wearing five-pointed tiara decorated with a star(?).<sup>14</sup> The tiara has a beaded border, and the lappet is swept back over the shoulder. The king wears a bead necklace.

11. Compare especially the portraits of Livia, RPC I (5042 [Egypt], 4016 [Mallus], and 2580 [Ephesus]).

12. Kokkinos (1998), 263.

13. CAA 153 and 154 are apparently the same denomination, as are ACV 158–160.

14. The best surviving example of the crown I have found is on 6b, where one can see a star flanked by two indistinct objects (eagles?) above a row of seven mountains (?). Bedoukian's

*Rev.*: ΒΑCΙΑΕΩC TIGRANOY ΜΕΓΑΛΟY; Heracles standing head left, a club in his r. hand rests on the ground and a lion skin hangs from his l. arm.

\*a) FK, 6.29 g.

7. Æ 16. ACV 171; CAA 151.

*Obv.*: As last.

*Rev.*: Same legend; elephant walking r.

\*a) FK, 3.69 g.

8. Æ 19. ACV 172; CAA 150.

*Obv.*: As last.

*Rev.*: As last, but elephant walking l.

\*a) FK, 6.21 g.

9. Æ 15. ACV 165; CAA 155.

*Obv.*: As last.

*Rev.*: Same legend; eagle standing r.

\*a) ALMA 99.2546, 2.18 g (ex PB coll).

10. Æ 15. ACV 166; CAA 156.

*Obv.*: As last.

*Rev.*: As last, but eagle standing l.

\*a) FK, 2.63 g.

11. Æ 11. ACV 173; CAA 152.

*Obv.*: As last.

*Rev.*: Same legend, elephant's head l.

\*a) YTN coll., 1.84 g.

The coins are assigned here to Tigranes V based on their demonstrable differences in iconography from the coins of his nephew, Tigranes VI, who can now be provisionally identified as discussed below. One similarity shared by these closely related kings is the wearing of a long beard. At first glance, a full beard on Tigranes V, who was twenty or so at his accession (Kokkinos 1998, 246), seems incongruous, but, of course, he was old enough to have grown a beard. In contrast, Tigranes the Great, who reigned until about eighty-five years of age, is always seen clean shaven. Thus a bearded portrait is less an indicator of age than of personal or cultural choice.

description indicates only a star (CAA, 148); however, on the remaining example of nos. 6–10 listed here the design is unclear, usually appearing as three indistinct ovoid objects. One explanation may be that the first tiara design was not acceptable for some reason and was subsequently recut. The remaining examples, even the best preserved, show a design that seems intentionally erased or obscured.

The reign of Tigranes V has generally been described as uneventful; his coins are similarly unremarkable. They do not commemorate any historical or military events but merely copy designs common to the Seleucid and autonomous city coinage of Mesopotamia, Syria, and Phoenicia. The standing Herakles/Vahagn, which was employed extensively by Tigranes the Great (CAA, 99–103), would have had particular appeal for the Phoenician population, as well as the Armenian.<sup>15</sup>

### TIGRANES VI (II, HERODIAN), FIRST REIGN, AD 60–62

12. Æ 15. ACV 167–168 and 170;<sup>16</sup> CAA 157–158.<sup>17</sup>

*Obv.*: Head of king r. wearing five-pointed tiara, decorated with a star of eight rays and tied with a diadem; beaded border.

*Rev.*: ΒΑΣΙΛΕΥΣ ΤΙΓΡΑΝΟΥ; bipennis and club.

\*a) ALMA 99.2548, 2.75 g. (PB coll. = CAA 158).

13. Æ 15. ACV 169; CAA.<sup>18</sup>

*Obv.*: As last.

*Rev.*: Legend as last; palm branch.

\*a) FK, 2.42 g, 12:00.

14. Æ 18. ACV 162–163<sup>19</sup>; CAA 148.

*Obv.*: As last.

*Rev.*: ΒΑΣΙΛΕΥΣ ΤΙΓΡΑΝΟΥ ΜΕΓΑΛΟΥ; winged Nike standing r. holding a wreath in her raised r. hand.

\*a) YTN coll., 5.02 g.

15. Æ 15. ACV 164; CAA 149.

*Obv.*: As last.

*Rev.*: As last.

\*a) HMA 19031/24, 2.69 g (ex PB coll.).

In AD 60, having just displaced Tiridates, Parthian king of Armenia (54–60 and again 66–72 or later), Tigranes proceeded to further Roman interests by attacking the kingdom of Adiabene.<sup>20</sup> The effect was to weaken a Parthian vassal and

15. Mousheghian has attributed the Herakles/Vahagn type to one or more Armenian mints (HRAC, no. 26 ["Armenian mint"] and 86 ["Artaxata"]), but the findspots for these coins are frequently Syrian or Lebanese as well as Turkish.

16. ACV 167, 168, and 170 are the same type and denomination.

17. CAA 158 is correct; CAA 157 is misdescribed.

18. CAA 157; perhaps the wrong photo is supplied. Three examples are cited, one of which shows "A" to l. of the king's head.

19. ACV 162–163 are the same type and denomination.

20. See Kokkinos (1998), 249 for a discussion of other possible motives for Tigranes's attack.



strong supporter of the Jews who were constantly agitating for independence. The Parthian king Vologases I (AD 51–78) naturally came to the aid of Adiabene and to his inconvenienced brother Tiridates. The events of the ensuing war culminated in a diplomatic resolution that restored Tiridates to the throne of Armenia. At this point Tigranes VI disappears from history, though it must be emphasized that no ancient author reports his death.<sup>21</sup>

The coin types of the brief reign of Tigranes VI seem to refer to his role in the ongoing military activity that was Nero's eastern strategy. The image of Nike with wreath and palm and the palm branch account for three of his four denominations. The remaining design features a double axe (labrys) and a club. Although generally warlike in character, these symbols are not clear in their exact interpretation. The club is suggestive of Herakles, perhaps as Epinikios (bringer of victory), and the labrys may suggest Zeus Labraundos, or perhaps Zeus Stratios (general of the army).

There is a noteworthy inconsistency in the titulature of this coinage. Nos. 14 and 15 bear the title *Megalou*, but nos. 12 and 13 do not. Perhaps those without the title were issued before the conquest of Adiabene and those with issued after. The title *Megalou* appears to suggest control of more than one kingdom, and continues to be used in Tigranes's second reign (no. 16 and 17 below).

#### TIGRANES VI (II, HERODIAN), SECOND REIGN, AD 66/7

16. Æ 18. ACV 178; CAA 161.

*Obv.*: Jugate heads of Tigranes and his queen r. He wears a tiara decorated with a star; she wears a Phrygian cap; wreath border composed of laurel and ivy.

*Rev.*: ΒΑΣΙΛΕΥΣ ΤΙΓΡΑΝΟΥ ΜΕΓΑΛΟΥ; goddess seated l. on a rudder, her r. hand rests on the tiller, her l. holds a cornucopia; in exergue: TEK (= year 325 in the era of Aradus = AD 66/7)<sup>22</sup>

\*a) FK, 6.78 g.

17. Æ 17. ACV 179; CAA 162.

*Obv.*: As last, but bead and reel border.

*Rev.*: Legend as last, date ΤΦΥ [*sic*]; forepart of galloping horse r.

\*a) FK 4.32 g; b) Trade, AE 15, 4.14 g.

21. For the last mention of Tigranes VI, see Dio Cassius 42.20, where Tigranes is unsuccessfully besieged at Tigranocerta by Monobazos and Monaeses, who eventually withdraw. That Tigranes continued to be influential after losing Armenia is suggested by the success of his descendants. See Kokkinos (1998), 263, for commentary and a family tree.

22. Variant with TEK downward behind Tyche: ACV 178 (pl. 13).

The reattribution of this two-denomination series is the key to identifying the coins of Tigranes VI and, by comparison, of Tigranes V. Bedoukian (CAA, 161–162) first attributed these coins to Tigranes IV and Erato, describing the larger denomination as follows: “Fortune seated to l. on throne holding a cornucopiae [*sic*] in l. hand and in r. a spear (?)” This misinterpretation is easily seen and corrected with the better-preserved examples now available. (Pl. 82, 16a). The representation of the city-goddess seated on a horizontal rudder is otherwise unique to the city of Aradus and deserves comment. The earliest appearance of the goddess on rudder is on a rare bronze of 87/6 BC,<sup>23</sup> but by the end of the first century AD she had become a normal type for Aradus,<sup>24</sup> making an appearance in four of the six years of coinage from Tiberius to Nero, and again in the only year of issue for Domitian.

It should be noted that the aforementioned coins are dated to the city’s era of freedom, beginning in 259 BC, as are all coins of Aradus from that date until the last Roman issue of Gordian III in year 498 = AD 239/40.<sup>25</sup> The coin of Tigranes VI dated TEK (= 325 = AD 66/67)<sup>26</sup> fits well in this series alongside the only coinage of Nero from Aradus, which was struck in the same year but with the date rendered TKE (Pl. 82, 18a). The two different arrangements of the dates, TEK and TKE, present no problems, as their components are additive.<sup>27</sup> However, the second denomination, no. 17 above, is somewhat problematic. On the larger denomination, the date has been universally read as TEK, while on the smaller it has with similar unanimity been read as TEV. A close look at the photo of the only known die for this coin (Pl. 82, 17a) largely confirms this reading; however, logic suggests that an engraver’s error is to be suspected.

On this die, the engraver has laid out the extremities of each letter with punch marks and then misconnected them. This kind of error is frequently found on late Hellenistic coins where the engraver is either unfamiliar with Greek or illiterate. Other letters on this die are also malformed or blundered, as can be seen in the word [TI]ΓPA NOY where Γ leans left and is missing its horizontal element, P looks more like a Ϝ, and A is connected to the horse’s hoof, giving the impression of an M.

23. Duyrat (2005, 113, 4618–4619). See also Babelon (1893, 1128 [year 217 = 43/2]).

24. *RPC I* (4475 [AD 25/6], 4476 [AD 38/9], 4477 [AD 48/9], and 4491 [AD 66/7]). *LIMC* 115–141 lists no coins of this type from any city, which is clearly an oversight, although it lists three inscribed gems (Tyche/Fortuna nos. 42, 110A, 177A).

25. *BMC Phoenicia* (p. 50, 387–389).

26. This date for Tigranes cannot be Seleucid, as that would equate with AD 13/14, when Vonones was king of Armenia.

27. A third variation, units, tens, and hundreds, is illustrated on the coins of Domitian from Aradus (*RPC II*, 2039–2043), where the date is BNT = 352 = AD 93/4 (see pl., 74, 19, for an example). A fourth variation: tens, units, hundreds, IAT = 311, can be found on coins of Soli-Pompeiopolis, *SNG CM* 2 (1252, 1253).

The unfortunate engraving of the smaller denomination aside, two facts remain unchallenged: the Tyche seated on rudder is found only on coins of Aradus, and she is always accompanied by a date in the city's era.

The attribution to Aradus, however, raises questions that may not be answerable. Why was Tigranes there, and what was he up to? Without source information, one is left to speculate. It is likely that Tigranes had family ties and property in Aradus or its territories. This conjecture is plausible for two reasons. First, the territory was well within the former boundaries of the empire of Tigranes the Great<sup>28</sup> and was likely still populated to some extent by influential Armenian families. However, it is even more likely that Tigranes enjoyed a power base in northern Phoenicia as a Herodian prince, where adjacent territory would be administered by his kinsmen or other Roman client kings associated by marriage to the House of Herod.<sup>29</sup> Tigranes's choice of a coin type recognizably from Aradus, when he could have employed any type for propaganda purposes, suggests some affinity for the city.<sup>30</sup>

As to Tigranes's intentions in AD 66/7, it would seem that he planned to retake the throne of Armenia. The coins struck bearing the royal images and titles are typically Armenian in size, weight, and general appearance, while the three types of the same year struck with Nero's image are the broader and heavier coins typical of the imperial and civic issues of the city. The former were clearly intended for use in Armenia. Whether such a plan to retake Armenia was initiated by Rome, by Tigranes, or whether it was intended as part of the Jewish War or aborted because of it, is unknowable at present.

### THE PORTRAITS

The most important aspect of the Aradus 66/7 coinage is in the identification of the king's portrait (Pls. 81–82, nos. 12a–15a), the particulars of which require enumeration.<sup>31</sup> In both series (Pls. 81–82, 12a–15a and 16a–17a), the king's head is truncated at the neck. His tiara has five points and is decorated with a star. The

28. There is sufficient evidence to pursue the hypothesis that Aradus struck bronze coins for Tigranes the Great, Artavasdes II, Artaxias II, and Tigranes III. I intend to explore this evidence in a future article.

29. At this time, Agrippa II controlled all of Judaea and the tetrarchy of Chalcis, Antiochus IV held Commagene, Aristobulus IV controlled Armenia Minor, and Polemo II of Pontus held some part of Cilician(?) Armenia. For the last, see *RPC I* 3844.

30. The choice of civic types by late Hellenistic rulers is not uncommon. A few examples are Athena Megarsis, Demetrius I–Antiochus IX at Mallus (*CSE I*, 39–40); the pyre of Sandan, Antiochus VIII and IX at Tarsus (*CSE I*, pl. 37); and the Tyche of Damascus, Tigranes II at Damascus (*CAA*, nos. 12–15).

31. The descriptive details mentioned will not be visible on all examples due to the irregularities of preservation, centering, and wear.

fanion and lappets hang directly down. The facial expression and proportions are the same, and the long beard has a blunt ending. The addition of Tigranes's queen to the 66/7 coinage will be addressed below.

The separation of Tigranes VI's portraits from those of his uncle (nos. 6–11 above) is accomplished by comparison with the above points. First, all portraits of Tigranes V show a draped bust adorned with a bead necklace. Second, the five-pointed tiara of Tigranes V is decorated not with a distinct star but with an uncertain design usually seen as several ovoid objects. Third, the lappet(s) are swept back over the shoulder as though blowing in the wind, and the tiara is inclined slightly further back on the head. The beard of Tigranes V ends rather abruptly in a point, a feature only visible on the best examples.

Using the above criteria, the separation of the coins of Tigranes V and VI can easily be made. In underscoring this division, it should be noted that none of the reverse types for either king has been found muled with the obverse type of the other. This is as one would expect for reigns separated by more than forty years and several intervening kings.

The introduction of Tigranes VI's queen on the coins of his second reign raises some questions as to her identity but does little to answer them. Without her name on the coins or in the histories, we can only identify her indirectly through her progeny.<sup>32</sup> Her inclusion on the second-reign coinage suggests a recent marriage or at least an enhanced importance. Her depiction wearing a Phrygian cap is suggestive of an Orontid origin and may have been intended to make Tigranes more palatable to his prospective Armenian subjects.

What is clear from a close look at her portrait is that she is not Erato, as originally identified by Bedoukian. Her headdress can be seen to be in sharp contrast to the Roman-style hairdo on the coins where Erato is identified by name. Furthermore, it would be illogical that Erato, who was important enough to be named on her coins, would lose that distinction on a subsequent issue. This, taken with the clear evidence of the now legible date is enough finally to discard Bedoukian's attribution and deal with these coins as evidence of another reign.

Nothing more is known of Tigranes VI and his queen except that they did not succeed in displacing Tiridates, who remained king until after AD 72.

The reattributions suggested above for Tigranes IV, V, and VI are largely based on the discovery of better examples of published coins, which have provided critical new details of legend, royal portraiture, and reverse types. Although I believe my conclusions to be sound and logical, based on this new information and on the

32. See Kokkinos (1998), 250, for Tigranes's son Alexander IV, and see Kokkinos (1998), 263 for the family tree of this branch of the Herodian line, 36 BC–AD 150.

patterns in the coinage I perceive, I cannot insist that they are the final word. New and better preserved coins may lead to other interpretations, so I can only hope that this note will serve to advance discussion in the right direction.

### ACKNOWLEDGEMENTS

My thanks to Andrew Burnett, Francois de Callataÿ, Peter Franke, and Ruben Vardanyan for valuable critiques of early drafts of this article; remaining errors or misinterpretations are my own. Special thanks to Gary Lind-Sinanian of the Armenian Library and Museum of America, Watertown, Mass., for making available the Bedoukian collection, and to Y. T. Nercessian and Sarkis Kilimdgyan for access to their collections. Thanks also to Ruben Vardanyan of the History Museum of Armenia, Yerevan; to the Hunterian Museum, Glasgow; and to the British Museum, London, for permission to publish their photos.

### KEY TO PLATES 81–82

- 1a. Tigranes IV. Æ 18. ALMA 99.2551.
- 1b. Tigranes IV. Æ 18. SK coll.
- 2a. Tigranes IV. Æ 16. ALMA 99.2538.
- 3a. Tigranes IV & Augustus. Æ 27. HMA 19878/6.
- 4a. Tigranes IV & Erato. Æ 22. Glasgow, Hunterian.
- 5a. Tigranes IV & Erato. Æ 19. FK coll.
- 5d. Tigranes IV & Erato. Æ 18. SK coll.
- 6a. Tigranes V. Æ 20. FK coll.
- 7a. Tigranes V. Æ 16. FK coll.
- 8a. Tigranes V. Æ 19. FK coll.
- 9a. Tigranes V. Æ 15. ALMA 99.2546.
- 10a. Tigranes V. Æ 15. FK coll.
- 11a. Tigranes V. Æ 11. YTN coll.
- 12a. Tigranes VI. Æ 15. ALMA 99.2548.
- 13a. Tigranes VI. Æ 15. FK coll.
- 14a. Tigranes VI. Æ 18. YTN coll.
- 15a. Tigranes VI. Æ 15. HMA 19031/24.
- 16a. Tigranes VI & queen. Æ 18. FK coll.
- 17a. Tigranes VI & queen. Æ 17. FK coll.
- 18a. Nero. Æ 24. British Museum (RPC I, 4499.1).
- 19a. Domitian. Æ 23. FK coll.

## ABBREVIATIONS OF COLLECTIONS

- ALMA Armenian Library and Museum of America, Watertown, Mass.  
 HMA History Museum of Armenia, Yerevan, Armenia.  
 FK Frank Kovacs collection, California.  
 YTN Y. T. Nercessian collection, California.  
 PB Paul Bedoukian collection (now in ALMA).  
 SK Sarkis Kilimdgyan collection, California.

## REFERENCES

- ACV = Nercessian, Y. T. 1995. *Armenian coins and their values*. Armenian Numismatic Society Special Publication 8. Los Angeles.
- Afram, Michael. 1986. *Nomina Propria Iranica in Nummis*. *Iranisches Personennamenbuch* IV. Vienna: Oesterreichischen Akademie der Wissenschaften.
- Auctiones A.G. 1981. Auktion 12. September 29–30. Basel.
- Babelon = Babelon, M. E. 1893. *Les Perses Achéménides, les satraps, et les dynastes tributaire de leur empire Cypre et Phénicie*. Paris: C. Rollin and Feuardent.
- Bedoukian, P. 1987. An unpublished coin of Tigranes III (20–8 BC). *Armenian Numismatic Journal* 13: 12–13.
- CAA = Bedoukian, P. 1978. *Coinage of the Artaxiads of Armenia*. RNS Special Publication 10. London.
- CSE = Houghton, A. 1983. *Coins of the Seleucid Empire from the Collection of Arthur Houghton*. ACNAC 4. New York: American Numismatic Society.
- De Morgan, J. 1965. *The history of the Armenian people*. Boston.
- Duyrat, F. 2005. *Arados Hellénistique: Étude historique et monétaire*. Bibliothèque archéologique et historique 173. Beyrouth: Institut français d'archéologie du Proche-Orient.
- Etterich, W. 2005. Letter to the editor. *Armenian Numismatic Journal* 31 (4): 73.
- Foss, C. 1986a. The coinage of Tigranes the Great: Problems, suggestions, and a new find. *Numismatic Chronicle* 146: 48.
- . 1986b. Tigranes the Younger. *SAN Journal* 16, (4): 64–66.
- Gökylidirim, T. 2005. Türkiye'den Artaksiad Hanedanı'na ait bir define (1991). In *Sevgi Gönül Hatıra Sayısı*, 19–39. İstanbul: Turkish Numismatic Society Publications.
- HRAC = Mousheghian, A., and G. Depeyrot. 1999. *Hellenistic and Roman Armenian coinage (1st c. BC–1st c. AD)*. Moneta 15. Wetteren: Moneta.
- Kokkinos, N. 1998. *The Herodian dynasty: Origins, role in society, and eclipse*. Journal for the Study of Pseudepigrapha Supplement Series 30.

- Kovacs, F. L. 2004. Additions and corrections to Armenian coins and their values. *Armenian Numismatic Journal* 30 (3): 83–86.
- . 2005/6. Tiridates I of Armenia. *Jahrbuch für Numismatik und Geldgeschichte* 55/56: 105–110.
- LIMC = 1997. *Lexicon Iconographicum Mythologiae Classicae*. Vol. 8, *Thespiades–Zodiacus*. Zurich: Artemis & Winkler Verlag.
- RPC I = Burnett, A., M. Amandry, and P. P. Ripollès. 1992. *Roman provincial coinage* I. London: British Museum Press.
- RPC II = Burnett, A., M. Amandry, and I. Carradice. 1999. *Roman provincial coinage* II. London: British Museum Press.
- SNG CM = 1993. *Sylloge Nummorum Graecorum. France 2. Cabinet des Medailles. Cilicie*. Zurich: Bibliotheque nationale de la France/Numismatica Ars Classica.
- SNG BN = 1983. *Sylloge Nummorum Graecorum. France 1. Collection of Jean and Marie Delepierre*. Paris: Bibliotheque nationale de France.

## “Pseudomints” and Small Change in Italy and Sicily in the Late Republic

PLATES 83–85

CLIVE STANNARD\* AND SUZANNE FREY-KUPPER\*\*

Two “pseudomints” of the first century BC are described: Pseudo-Ebusus/Massalia (almost certainly at Pompeii) and Pseudo-Panormos/Paestum (probably at Minturnae). The circulation of their coins, and of a plethora of foreign coins, suggests that a relatively monetarized economy in Latium and Campania was pressing all available coin into service, in a context of a penury of small change. Appendix 1 considers the circulation and overstriking in central Italy of Koan bronze coin. Appendix 2 compiles finds of foreign coin from Rome, Minturnae and Pompeii.

The systematic imitation of the small bronze coinage of a number of foreign mints is a strange feature of the monetary history of central Italy in the late second and first centuries BC.<sup>1</sup> Stannard has documented the systematic copying in this area of a number of foreign mints, drawing, in particular, on two very large bodies of material:

A database of “foreign” (that is, non-Roman) coins—in trade or in private collections—that can be provenanced to the River Liri, or Garigliano, at Minturnae; no attempt was made to record the large numbers of standard republican and imperial coins that are part of the same finds.<sup>2</sup> This database

\*clive.stannard@mac.com

\*\*suzanne.frey@sunrise.ch

1. We thank those who kindly read and commented on drafts of this paper, or gave advice on a variety of questions: Andrew Burnett, Richard Hobbs, Maria R. Alföldi, Rick Witschonke, and Max Stöckli, Schwarzenburg, who designed the maps.

2. Some idea of the range of finds can be obtained from Frier and Parker (1970), Metcalf (1974), and Houghtalin (1985). The coins listed in these articles are from underwater exca-



now describes one of the largest groups of “foreign” coins from any ancient site. They are, with few exceptions, bronze, from most of the ancient world, and from the fourth century BC to about the time of Christ, but mainly from the latter part of this period.<sup>3</sup>

Coins from excavations at Pompeii, including by the British School at Rome in the House of Amarantus (Insula I.9.11–12); from sporadic finds and excavations for the installation of electric lighting in the forum area, conserved in the Uffici Scavi; and from old excavations and a purse hoard from the sewers of a bathhouse (Insula VIII.5.36), both in the Naples Museum (Stannard 2005b).<sup>4</sup> There is comparative material from a votive well at Gragnano (Cantilena 1997).

Three mints that were imitated have already been identified and described: Panormos,<sup>5</sup> Ebusus,<sup>6</sup> and Massalia<sup>7</sup> (Fig. 1). We use the term “pseudomints” to denote such systematic imitation, over a period of time, by a single emitter, of an issue or issues of a foreign mint.<sup>8</sup> The phenomenon is qualitatively different from the casual copying of a few individual coins by forgers, or diffuse, widespread copying, examples of which are the British copies of Claudian *asses* and—on a larger scale—the epidemic imitation of *antoniniani* in the third quarter of the third century AD in the northeastern provinces (Peter 2004, esp. 22–25; Wigg-Wolf 2004, 64–67).

To these “pseudomints” must now be added Paestum. In studying “Greek” coins from the Tiber, Frey-Kupper (1995) identified two coins with a common obverse die, one of which uses a Paestan reverse type, and the other a Panormitan, so linking these series.<sup>9</sup> She suggested that both were Paestan. She also sug-

gestions by Br. Dominic Ruegg and are discussed by him in Ruegg (1995, 61–73, 148–152). Vismara (1998, in Bellini 1998–2000, vol. 2) republished all Ruegg’s Greek and Roman imperial coins, and more. For more recent finds, see Giove (1998). On material from the river Liri in trade, see Martini (1988, 96–97). See also Appendix 2 below.

3. Coins from the Liri database (cited in the catalogue as “Liri”) are identified by an accession number composed of two elements: a whole number, signifying the block of coins in which the piece was recorded, and a decimal number in three places, signifying the individual piece within that block. The coins catalogued in Vismara (1998) and Giove (1998) have not yet been consolidated into this database.

4. Pietro Giovanni Guzzo, Soprintendente Archeologico di Pompei, has encouraged many teams to dig below the destruction layer of AD 79, which has resulted in a much richer information base for the period with which we deal.

5. Stannard (1998, 219–222), drawing, in particular, on the Liri database.

6. Pseudo-Ebusus was first published in Stannard (1998, 225–227), on the basis of the Liri material alone. The analysis was broadened to Pompeii in Stannard (2005b, 2005a).

7. Stannard (2005b, 139–140); largely the Pompeii material.

8. We do not wish to imply that pseudomints were necessarily institutions of a polity.

9. Frey-Kupper (1995, 48, no. 9), illustrated here as no. 12, has the Paestan clasped hands

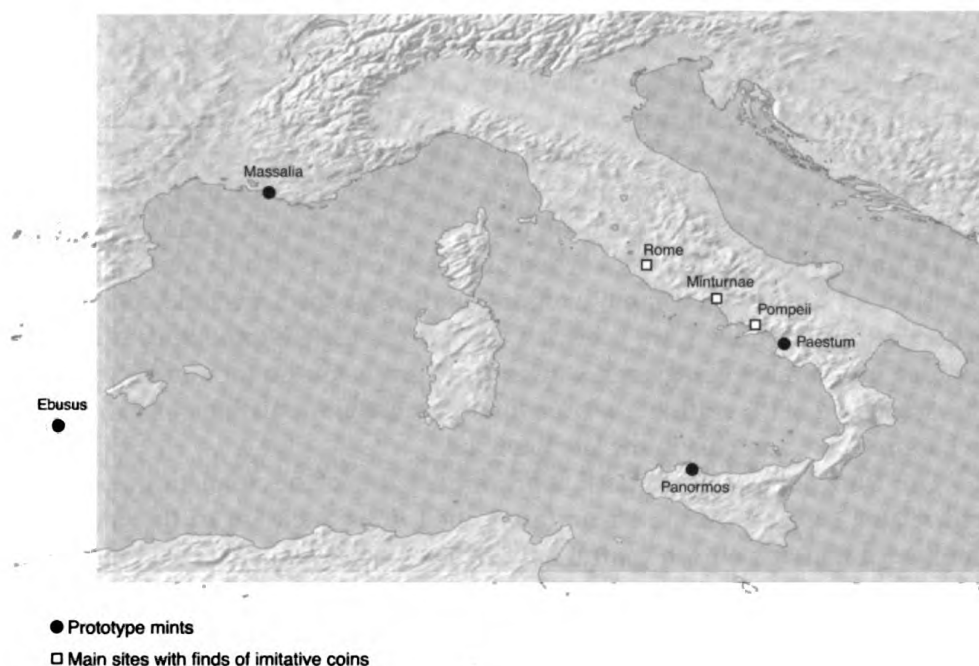


Figure 1. Mints imitated by the pseudomints (Ebusus, Massalia, Panormos, and Paestum), and the main sites discussed in this paper.

gested that three other pieces with the same Panormitan reverse were imitations of Panormos, probably of Italian origin.<sup>10</sup>

We have since pooled our materials and looked in more detail into the Pseudo-Paestan and associated coins that we discuss here, in the context of reconsidering the general phenomenon of imitative bronze coinages in central Italy and the circulation of small change in Italy and Sicily in the late Republic. Our conclusions go beyond the ideas in earlier papers and supplant them.

We illustrate a number of coins showing that Pseudo-Panormos and Pseudo-Paestum share dies and must have been made in a single pseudomint. We tentatively attribute Pseudo-Panormos/Paestum to Minturnae in the latter part of the first century BC. We consider the dating and describe the circulation in Sicily of the

reverse (like our no. 5) and is linked by the obverse die to her 49, no. 11, with the Panormitan standing warrior (like our nos. 1 and 2). Unfortunately, her illustrations were mixed up, and repeated the obverse of 48, no. 10, as the reverse of 48, no. 9; see also 39–40.

10. Frey-Kupper (1995, 50, nos. 16 [illustrated here as no. 21], 17, and 18). "Le monete ai nn. 16–18, che generalmente vengono definite come imitazioni del tipo *testa di Zeus / guerriero* . . . a mio avviso, non sono state emesse a *Panormos*; infatti, nei ritrovamenti a me noti è stato rivenuto un solo esemplare di questo tipo, e precisamente tra le circa 10.000

Panormitan model for Pseudo-Panormos. We also show that Pseudo-Ebusus and Pseudo-Massalia were struck in a single pseudomint, which we attribute with near certainty to Pompeii in the early first century BC. We discuss the circulation in central Italy of both pseudomints' coins and of small change in general and address the implications for understanding the contemporary economy. We compare this to the situation in Sicily, recently studied on the basis of large samples from excavations.

In Appendix 1, we discuss a group of imitative coins, struck over an issue of the island of Kos that is commonly found in the Liri, the Tiber, and central Italy generally. In Appendix 2, we present a synoptic table listing the finds of foreign coins from a number of major sites, in order to give a context for our discussion of the circulation of the coins of the pseudomints and the circulation of small change in Latium and Campania in the late Republic.

Our work builds upon important previous studies of the circulating *aes* in Italy and related subjects. Attilio Stazio (1955) first drew attention to the enormous number of Ebusan coins in central Italy. Marta Campo's (1976, 1993) analyses of the structure of Ebusan bronze coinage made it possible to identify the imitative series. Michael Crawford provided a firm range of dates for the Roman Republican coinage and for several local series.<sup>11</sup> He and Andrew Burnett began the systematic analysis of the larger framework of coin circulation in late Republican Italy.<sup>12</sup> The finds at a number of Italian sites have been documented, making comparison and analysis possible, for the material we discuss here: in Italy (from north to south), Cosa (Buttrey 1980), Rome and the river Tiber (Appendix 2), Minturnae and the river Liri (Appendix 2), Pompeii and its surroundings (Appendix 2), Velia (Libero Mangieri 1990a, 1993) and Paestum (Cantilena, Pellegrino and Satriano 1999); and in Sicily (from east to west), Morgantina (Buttrey, Erim, Groves, and Holloway 1989), Solunto (Tusa Cutroni 1955, 1956, 1958–1959), Monte Iato (Frey-Kupper forthcoming; 1992a, esp. 281–287), and Segesta (Gandolfo 1995; Mammina 1995, 1997). For Italy, the new *Historia Nummorum* is an important tool, which, if used systematically to document new finds, will facilitate comparison.<sup>13</sup>

## CATALOGUE OF THE TYPES DISCUSSED

### The Panormitan and Paestan Prototypes

The systematic striking of coins imitating Panormos and Paestum is a purely central Italian phenomenon. Such coins were not made in Sicily. The Pseudo-Panor-

monete rinvenute a Morgantina [Buttrey, Erim, Groves and Holloway 1989, 94, no. 264, pl. 24]. Non è chiaro dove queste imitazioni sono state prodotte. Allo stato attuale, l'ipotesi più probabile mi sembra una localizzazione dell'emissione in Italia" (Frey-Kupper 1995, 40–41).

11. *RRC* and Crawford (1973), and the following note.

12. *CMMR*, 52–74, 103–115, 177–194; Burnett (1982); Crawford (1982).

13. The Sicilian volume is in preparation.

mos group copies the standing warrior reverse used on the two following canonical Panormitan coins.

*Obv.* Laureate head of Zeus, left; border of dots.

*Rev.* Helmeted warrior standing half-left, holding *patera* and spear; shield rests against spear; ΠΑ-NOP-MITAN around; border of dots.

1 Æ 18 mm ↓ 3.46 g Gàbrici (1927, 154, nos. 36-43); Vienna 6679 (this coin)

*Obv.* Same as last, but head right.

*Rev.* Same as last, but ΠΑ-NOP up to left.

2 Æ 17 mm ↙ 3.70 g Gàbrici (1927, 154, nos. 32-35); Paris, Seymour de Ricci Panormos 2 (this coin)

The following variant of this Panormitan type, which includes an ear of corn, was not imitated.

*Obv.* Same as last, but of a bolder style.

*Rev.* Same as last, but of a bolder style, and an ear of corn with leaf sprouting from the ground to the left of the warrior, ΠΑ-NOP-MITAN around.

3 Æ 18 mm ✓ 2.69 g Gàbrici (1927, 154, nos. 44-51); from Monte Iato, Frey-Kupper (forthcoming), no. 409 (this coin)

Two Paestan types are copied.

*Obv.* Helmeted head, right; S behind; PAE before upward; border of dots.

*Rev.* Rudder and tiller; M.OCI above; IIII.VIR below; border of dots.

4 Æ 14 mm ↖ 2.66 g Crawford (1973, 91, no. 31/1); Liri 13.104 (this coin)

*Obv.* Same as last.

*Rev.* Clasped hands; L.FΔ above; L.SA below; border of dots.

5 Æ 15 mm ↘ 2.42 g Crawford (1973, 91-93, no. 32); Liri 4.094 (this coin)

### The Pseudo-Panormitan/Paestan Issues

A number of die links prove that a single "mint" imitated both Panormos and Paestum. The imitations are mostly of a rudimentary style, with macaronic legends, and the Panormitan obverse head of Zeus is often replaced by a variety of odd heads. The legends on these pieces are so deformed that we hesitate to transcribe them, and in so doing attribute sense that may not be there.

No. 6 copies the rudder-and-tiller reverse of no. 4. Only one reverse die is known, but the obverse die also pairs with four standing warrior reverse dies that copy Panormos (nos. 7 to 10). These are part of a much larger group of imitations with the standing warrior reverse: Stannard (1998, 220) earlier identified at least fifteen obverse and twenty reverse dies. Our nos. 7 to 11, 13, 15, 18 and 19, 21 and

22, and 24 and 25, also use the Panormitan standing warrior reverse and include new dies and die links within Pseudo-Panormos and between Pseudo-Panormos and Pseudo-Paestum.<sup>14</sup> We hope to publish a corpus of this material in due course.

*Obv.* Laureate, bearded head, left; border of dots.

*Rev.* Rudder and tiller, arrow to right, APTĒ above, MCN below; border of dots.

6 Æ 16 mm ✓ 2.74 g Copenhagen uncertain = Stannard (1998, 220, no. 57)  
(this coin)

*Obv.* Same as last; same die.

*Rev.* Helmeted warrior standing left, holding *patera* and spear; shield rests against spear; macaronic legend; border of dots.

7 Æ 16 mm → 2.69 g Liri 8.001 = Stannard (1998, 220, no. 58) (this coin)

*Rev.* Same as last, but different macaronic legend.

8 Æ 18 mm ↖ 3.25 g Liri 4.117 = Stannard (1998, 220, no. 59) (this coin)

9 Æ 15 mm ↗ Liri 100.108 = Stannard (1998, 220, no. 60) (this coin)

*Rev.* Same as last, but different macaronic legend.

10 Æ 15 mm ↓ 2.92 g Liri 28.018 = Stannard (1998, 220, no. 61) (this coin)

There are three pairs of coins that tie Pseudo-Paestum (clasped hands) to Pseudo-Panormos (standing warrior) through shared obverse dies (nos. 11 and 12, 13 and 14, and 15 and 16). No. 17 also copies this Paestan type, but the obverse die is closer in style to the model. The legends of nos. 16 and 17 are macaronic, as in the Pseudo-Panormitan issues. It is also difficult to decide which side of these clumsy reverses is up: the coins are shown with thumbs uppermost. Although much less common than Pseudo-Panormos, Pseudo-Paestum is still a substantial issue: nos. 12, 14, 16, and 17 all use different obverse and reverse dies.

*Obv.* Head of Mercury, wearing winged *petasus*, right; C behind; IIOVO before;<sup>15</sup> border of dots.

*Rev.* Helmeted warrior standing half-left, holding *patera* and spear; no shield; AVH to left; border of dots.

11<sup>16</sup> Æ 17 mm ↑ 2.54 g BerlinLöbbecke=Stannard(1998,222,no.77)(thiscoin)

14. Our nos. 15, 21 and 22, and 24 and 25 are new dies or die links.

15. Although we transcribe the legend, the letters are so poor that it is unlikely to have any significance.

16. We know of many specimens from this pair of dies. There are five from the Liri, three weighed (2.12 g, 3.46 g and 3.46 g). From Rome, there are Frey-Kupper (1995, 48, no. 10 [2.68 g]) and a certain specimen (3.02 g) from the *Sottosuolo*, as well as two much corroded but probable specimens (c. 2.1 g and 1.9 g). For the Greek material from the *Sottosuolo*, see

*Obv.* Same as last; same die.

*Rev.* Clasped hands; L.FA above; L.SA below; border of dots.

12 Æ 16 mm ← 2.96 g Rome, Lungotevere (1877–1890); Rome, Museo Nazionale Romano, Inv. 47050 = Frey-Kupper (1995, 48, no. 9) (this coin)

*Obv.* Beardless, helmeted head right; border of dots.

*Rev.* Same as no. 11; same die.

13 Æ 17 mm ✓ Liri 32.070 = Stannard (1998, 222, no. 78) (this coin)

*Obv.* Same as last; same die.

*Rev.* Same as no. 12, but a different die.

14 Æ 16 mm → 3.49 g Paris 1350 (this coin)

*Obv.* Same as no. 13, but S behind and PAE upwards before.

*Rev.* Same as no. 11, but any legend illegible.

15 Æ 16 mm ↑ 3.77 g SNG Cop., *Italy-Sicily*, no. 1378 (this coin)

*Obv.* Same as last; same die.

*Rev.* Clasped hands; macaronic legend around.

16<sup>17</sup> Æ 16 mm ✓ CIN Naples, Sallusto plaques 627 (this coin)

*Obv.* Like no. 5.

*Rev.* Same as last, but different macaronic legend around.

17 Æ 15 mm ✓ 2.87 g Crawford (1973, 93, no. 32 var.);<sup>18</sup> Liri 4.091 (this coin)

Nos. 18, 19 and 20 share a common obverse. Nos. 18 and 19 copy the Panormitan standing warrior. The heavily double-struck reverse of no. 20 is illegible, but it seems not to be a Panormitan or a Paestan type, which shows that these issues could extend into yet other types. Perhaps a readable specimen will turn up.

*Obv.* Laureate head of Zeus, right.

*Rev.* Helmeted warrior standing right, holding *patera* and spear; shield rests against spear; ΠA-NOP down to right; MITAN down to left; border of dots.

18 Æ 17 mm ↖ 2.21 g Liri 4.118 = Stannard (1998, 221, no. 70) (this coin)

*Obv.* Same as last; same die.

*Rev.* Same but no shield; SI up to left, TO down to right; border of dots.

19 Æ 16 mm ↑ 2.47 g Liri 4.119 = Stannard (1998, 221, no. 71) (this coin)

R. Alföldi (1991); we are grateful to her for having shown this material to Frey-Kupper in Frankfurt am Main some years ago. We know of the following museum specimens: Berlin (our no. 11), the Ashmolean in Oxford (3.27 g; we thank Henry Kim for a cast), and SNG Cop., *Italy-Sicily*, no. 568 (2.92 g).

17. Vismara (1998, 60–61, and pl. III, no. 40) is another specimen from the same dies.

18. Crawford (1973, 93) notes that "this issue is perhaps an unofficial copy."

*Obv.* Same as last; same die.

*Rev.* Unclear: inscription in a wreath?

20 Æ 12 mm 2.71 g Liri 37.011 (this coin)

Two more coins in the Pseudo-Panormos standing warrior group (nos. 21 and 22) share an obverse die with a coin copying a Roman *quadrans* prow reverse (no. 23). The reverse die of no. 21 also links to an obverse with a helmeted head, used with a standing warrior reverse (nos. 24 and 25) and with an eagle on a thunderbolt reverse (no. 26).<sup>19</sup>

*Obv.* Diademed and bearded head, right; border of large dots.

*Rev.* Helmeted warrior standing left, holding *patera* and spear; shield rests against spear; no visible legend; border of dots.

21 Æ 15 mm ↘ 2.85 g Rome, Lungotevere (1877–1890); Rome, Museo Nazionale Romano, Inv. 103189 = Frey-Kupper (1995, 50, no. 16) (this coin)

*Obv.* Same as last; same die.

*Rev.* Same as last; different die.

22<sup>20</sup> Æ 17 mm ↖ 2.61 g Naples P 14184 bis (this coin)

*Obv.* Same as last; same die.

*Rev.* Prow left; — above; border of dots.

23<sup>21</sup> Æ 15 mm ↓ 3.28 g Berlin 28624/13 (this coin)

*Obv.* Helmeted head right.

*Rev.* Same as no. 21; same die.

24 Æ 16 mm → Liri 100.177 (this coin)

25 Æ 15 mm ↑ 2.70 g Benedetti, Catalli, and De Lucia Brolli (1999, 60, no. 16), listed as “Aetolian League,” from Monte Li Santi-Le Rote/*Narce* excavations, inv. 3135 (this coin)

*Obv.* Same as last; same die.

*Rev.* Eagle, right, its wings spread to either side, on a thunderbolt; border of dots.

26 Æ 15 mm ↗ 2.93 g Liri 100.189 (this coin)

19. For a possible connection to a group of coins struck over Kos, see Appendix 1, nos. 44 and 45.

20. There are two known specimens of this piece: the one illustrated and one from the British School excavations in the House of Amarantus at Pompeii (I.9.11–12) (ID 68; Season 98; Room 11.4; Context 1015).

21. This is a relatively common coin in the Liri finds.

### The Ebusan and Massaliot Prototypes

Most Pseudo-Ebusan issues imitate the canonical Ebusan facing Bes and butting bull types (Campo's groups XII and XVIII), examples of which we illustrate below.

*Obv.* Bes, nude, a hammer in his raised right hand, a snake in his left.

*Rev.* Bull butting left.

27 Æ 16 mm ↓ 3.39 g Campo (1976, group XII); Liri 14.071 = Stannard (2005a, 63–64, no. 41) (this coin)

*Obv.* Same; with symbol to left.

*Rev.* Same as obverse.

Obverse and reverse symbols: caduceus to left; *shin* to right (Campo [1976, group XVIII, 129, nos. 59–60]).

28 Æ 17 mm ↖ 3.13 g Campo (1976, group XVIII); Pompeii sporadic 59016 = Stannard (2005a, 63–64, no. 42) (this coin)

Massalia issued many small bronze pieces with an obverse head of Apollo and a butting bull reverse, and a variety of symbols. The imitations copy these types generally. We cannot be certain of which issue or issues specifically.

*Obv.* Laureate head of Apollo, right.

*Rev.* Bull butting right; ΜΑΣΣΑ above; ΛΙΑ in exergue.

29 Æ 16 mm ↑ 2.40 g Depeyrot (1999, 82, type 48/4); Py (2006, 235–257, PBM-50); Barrandon and Picard (2007, 99, no. 90); Liri 45.392 (this coin)

### The Pseudo-Ebusan/Massaliot Issues

The largest group of imitations are of Ebusus, usually copying Campo's group XVIII, such as the following coin.

*Obv.* Bes, wearing a tunic, his left hand raised, and a snake on his right arm; "T" to right.

*Rev.* Same as obverse.

30 Æ 15 mm ↖ 1.97 g Liri 5.003 = Stannard (2005a, 71–72, group VIII, 7, no. 75) (this coin)

There are also a number of linked anomalous types, including a walking horse (Stannard 2005a, 65, group I, 1); heads of Apollo, Mars, and Diana, a horse head, and a toad (Stannard 2005a, 68, the anomalous issues of groups III to VI); and a man with a palm-frond (Stannard 2005a, 73, group IX). The complex of Pseudo-Ebusan types is not described in detail here.<sup>22</sup>

22. For these types, see Stannard (2005a, 64–78), which supersedes Stannard (2005b).



In studying excavation coins from Pompeii, Stannard (2005b, 133–134, nos. 85–107) also demonstrated the existence of coins imitating Massalia, with a variety of legends, though this complex has not yet been studied in detail.

*Obv.* Laureate head of Apollo, right; border of dots.

*Rev.* Bull butting right; AOMΣ above; border of dots.

31 Æ 13 mm ↘ 1.20 g Pompeii Bathhouse purse hoard, no. 25 = Stannard (2005b, 133, no. 92) (this coin)

A number of new finds<sup>23</sup> show that there are still issues to be discovered, and that a single “mint” struck both Pseudo-Ebusus and Pseudo-Massalia. No. 32 is one of the anomalous types, from the bathhouse purse hoard. It shares its reverse type (a toad), with no. 35, the obverse of which imitates the Massaliot bull butting right. No. 35’s obverse type (Mars) is also used with coins, the reverse types of which (a butting bull) also imitate Massalia. The legends, which do not appear on Ebusan models, show this: MA above on no. 33 (the exergue is off the flan), and ΔA in exergue, on no. 36 (any legend above is off the flan). The same reverse type and exergual legend (another die) is used by no. 34, which might at first glance appear to be a canonical Massaliot issue of Depeyrot’s group 47/9,<sup>24</sup> but is almost certainly imitative, because the obverse symbol is not otherwise attested and because of its Liri provenance. (If so, it shows that Pseudo-Massalia imitations were sometimes so well made as to pass for originals.)<sup>25</sup> Moreover, no. 36 shares its reverse die with no. 37, the obverse die of which is Bes, the standard Ebusan type. A stylistically very similar obverse die is used, in no. 38, with a reverse type of a bull leaping right, which is not found on either the canonical Ebusan or Massaliot coins. This reverse die is then used, in no. 40, with a horse-head right obverse, which is probably the reverse die of Pseudo-Ebusan no. 39. This closely linked group of coins shows clearly that Pseudo-Ebusus and Pseudo-Massalia were struck together.<sup>26</sup>

23. Including in the materials from the Anglo-American Project at Pompeii (AAPP) excavations (discussed in Hobbs 2003 and Hobbs 2005) and from the University of Perugia excavations at Pompeii (Ranucci 2008, 252, fig. 4, no. 1).

24. See the reference in our catalogue.

25. The same problem in identifying the imitations occurs with Stannard (2005a, 70) (for Pseudo-Ebusus group VII): “These relatively normal Pseudo-Ebusan issues are in some ways the most difficult to identify, except when they carry symbols not present in the canonical Ebusan material, but nos. 67 and 68 have symbols also found on canonical Ebusus. I suspect that there are other—perhaps many other—relatively accurate local imitations of Ebusus in the coins found in Italy: those that are too accurate, we shall never be able to identify.”

26. “Obverse” and “reverse” dies appear to switch about in this group of coins. This shows that the dies were mobile, probably taking the form of small bronze shafts that could be

*Obv.* Head of Mars right, in crested helmet; border of dots.

*Rev.* Toad; border of dots.

32 Æ 15 mm ↗ 2.01 g Pompeii, bathhouse purse hoard 41 = Stannard (2005a, 68–69, no. 60) (this coin)

*Obv.* Same as last; different die.

*Rev.* Bull butting right; MA above.

33 Æ 13 mm → 1.48 g AAPP 2000, 120, 18, 173 (this coin)

*Obv.* Head of Apollo, right; ☿, behind.

*Rev.* Bull butting, right; ΜΑΣΣΑ above; ΔΑ in exergue.

34 Æ 13 mm ↙ 1.43 g cf. Depeyrot (1999, 81, group 47/9 [ΔΑ in exergue]); cf. Py (2006, 221–222, PBM-47-9); cf. Barrandon and Picard (2007, 98, no. 86); Liri 27.158 (this coin)

*Obv.* Bull butting right.

*Rev.* Toad.

35 Æ 15 mm ↗ 1.40 g AAPP 1996, 32, 7, 212 (this coin)

*Obv.* Same as nos. 32 and 33; different die.

*Rev.* Like no. 34, different die.

36 Æ 13 mm ↓ 1.20 g AAPP 2006, 600, 26, 199 (this coin)

*Obv.* Bes facing, wearing a tunic, holding a hammer in his raised right hand and a snake in his left.

*Rev.* Same as last, same die.<sup>27</sup>

37 Æ 13 mm ✓ 1.95 g Liri 14.070 = Stannard (2005a, 66–67, no. 47) (this coin)

*Obv.* Same as last; same die.

*Rev.* Bull leaping right; snake (?) below; the "wing" on the bull is a die break.

38 Æ 15 mm ↘ 2.31 g Liri 27.051 = Stannard (2005a, 66–67, no. 46) (this coin)

*Obv.* Laureate head of Apollo right; possibly O below right and monogram to left.

*Rev.* Horse-head, right.

39 Æ 15 mm ← 2.37 g Pompeii, from a cinery urn in tomb 7 OS Columella 2 = Stannard (2005a, 68, no. 53) (this coin)

mounted in either an iron anvil (an "obverse" die) or an iron punch (a "reverse" die). Stannard (1987) demonstrated such die mobility for Roman republican denarii and imperial bronzes. As used in the catalogue here, "obverse" simply means the image to the left on the plates; "reverse," the image to the right.

27. Misdescribed in Stannard (2005a, 67) as having two stars in exergue.

*Obv.* Same as the reverse of no. 39; probably same die.

*Rev.* Same as the reverse of no. 38; same die.

40 Æ 15 mm ↗ 1.44 g AAPP 2001, 140, 147, 219 (this coin)

## DISCUSSION

### The Panormitan Prototype

Before discussing Pseudo-Panormos, it is useful to look more closely at the prototype—that is, the issues with the types of a head of Zeus on the obverse and standing warrior and the ethnic ΠΑΝΟΡΜΙΤΑΝ on the reverse (nos. 1–3). The prototype is later than the larger “Romano-Sicilian” coins with the same types, which carry magistrates’ names in Latin but not the ethnic (Bahrfeldt 1904, 331–445, pl. 1–5: 384–407 [second group]). The find spots of these coins in northwestern Sicily concentrate around Panormos. This—and the monogram, ΠΡ, which the later magistrates of this series use—shows that they were intended to meet the needs of this important harbor metropolis. They date roughly to the second and third quarters of the second century BC, or slightly later, as archaeological data and hoards indicate.<sup>28</sup>

The date of the prototype—the coins with the warrior and ethnic—can be inferred from the presence of specimens in excavation strata related to the construction of the younger *bouleuterion*, the western stoa, and the podium temple built against the wall of the stoa, in the agora of Iaitas (Monte Iato), which is about forty kilometers southwest of Panormos (Palermo).<sup>29</sup> This complex was built during the last quarter of the second century BC, after the Second Slave War (135–132 BC). We propose to date the prototype between 130/120 and 90 BC: it was therefore available to be imitated from at least the early first century BC. Later in the first century BC, Panormos—like many other Sicilian cities—struck a large number of further issues with the ethnic.<sup>30</sup>

Of the twenty-nine coins with the warrior and ethnic reverse from the 1971–1990 Monte Iato excavations, eleven are of good style (like nos. 1 and 2). Most of the others are of a “bold” style, especially a group of nine coins with a head of Zeus, right, and a corn-ear growing from the ground to the left of the

28. For detailed arguments, see Frey-Kupper (forthcoming, part 1, chap. 4.5.2; 1992b).

29. For the contexts in which these coins are found, see Daehn (1991, 91, 94 [M 1117 = Frey-Kupper, forthcoming, no. 394], 93 [M 207 = Frey-Kupper, forthcoming, no. 395], and 120–122). For the discussion of the coins, see Frey-Kupper (forthcoming, part 1, chap. 4.5.3; part 2, chap. 2.2 [nos. 394–395]).

30. Frey-Kupper (forthcoming, part 1, chap. 4.5.3.3–8); for Panormos, see Gàbrici (1927, 155, nos. 98–108; 161, nos. 277–321 [units], and 153–155, nos. 1–3, 8–21, and 52–53 [halves]).

warrior (like no. 3). In studying these materials, Frey-Kupper wondered whether this group might be imitations, concluding that the complete legend (the layout of which is identical to that on the pieces without the corn-ear) and the normal average weight<sup>31</sup> give no grounds for this. A corn-ear is a frequent and normal symbol on Sicilian coins. These issues—with and without the corn-ear—may have been a useful intermediate fraction (c. 3.50 to 3.75 g) between the older, heavier warrior with magistrates' names series (c. 5 to 8 g for the various issues) and their corresponding fractions, which were much lighter (head of Demeter / prow, c. 1.20 to 2 g).

In addition to finds of the Panormitan warrior-and-ethnic coins in western Sicily, specimens have been found at sites between Latium and Calabria, including Rome, Minturnae, Paestum, and Locri (Fig. 4).<sup>32</sup> Their high frequency in the Tiber and Liri<sup>33</sup> materials, coupled with their relative rarity at Paestum and Locri and their absence at Velia, suggest that this dispersion pattern results from the commercial activities of Roman *negotiatores* in northwestern Sicily and Panormos.

It is instructive to compare the relative numbers of the two groups—the earlier warrior and magistrates' names coins and the later warrior-and-ethnic coins—that have been found in Sicily and in Latium (Rome and the Liri), as given in Table 1. Although information from Latium is limited, there appears to be a clear reversal of the relative numbers in the finds in Sicily and Latium. At Monte Iato, the coins with the magistrates' names are three times as common as those with the ethnic, and the picture is similar at other Sicilian sites.<sup>34</sup> This reflects the fact that the magistrates' issues were simply larger. The relatively larger numbers of coins in Latium with the warrior and ethnic reflects an increased flow of coins from Panormos to Latium in the late second and early first centuries BC, which then lessened, to judge from the rare finds of later Panormitan issues.<sup>35</sup>

31. At 3.75 g (n = 21 from collections), this is slightly higher than the weight of our nos. 1 (3.48 g for the variant with head left, n = 31) and 2 (3.49 g for the variant with head right, n = 65). See Frey-Kupper (forthcoming, part 1, table 59, and part 3, appendix 5, nos. 14, 1–14, 3).

32. For the detailed list of the find spots and the bibliography, see Frey-Kupper (forthcoming, part 3, appendix 3, no. 24).

33. Four warriors with magistrates' names and one Demeter / prow fraction; nine warriors with *ethnic*.

34. *Morgantina*/Serra Orlando: ten coins with magistrates' names and one with *ethnic*; *Solus*/Solunto: forty-four coins with magistrates' names and twenty-three with *ethnic*; *Entella*/Rocca d'Entella: three coins with magistrates' names and none with *ethnic*. See Frey-Kupper (forthcoming, appendix 3, nos. 15 and 24).

35. Frey-Kupper (1995, 53, no. 33 [head of Zeus/tetrastyle temple]); Liri database: three ram over Janus-head/eagle (Gàbrici 1927, 161, nos. 314–321) and one Tiberian issue (Gàbrici 1927, 162, nos. 339–341 = *RPC* I, 172–173, no. 644).

Table 1. Relative numbers, in Sicily and in Latium, of coins of Panormos with magistrates' names, and coins with the ethnic

Sicily				Latium					
Iaitas		Rome				Minturnae		Latium total	
Monte Iato		Tevere		Sottosuolo		Liri			
Magistrates	Ethnic	Magistrates	Ethnic	Magistrates	Ethnic	Magistrates	Ethnic	Magistrates	Ethnic
88	29	—	4	1	4	5	9	6	17
75%	25%							26%	74%

### The Paestan Prototype

The issue with the clasped hands and the legend  $\Phi\Delta$  /  $\Lambda\Sigma\Lambda$  (no. 5) is the most frequent of all late Paestan issues, to judge from its occurrence in collections,<sup>36</sup> in the Tiber at Rome, and in the Liri at Minturnae. Its dating is important for establishing the chronology of the pseudomint. Crawford has proposed a date for the clasped-hands type in the 40s BC, as it appears to derive from denarii of the time of Caesar.<sup>37</sup> We use this dating in this paper and consider it further when discussing the dating of the imitative issue. The tiller-and-rudder issue, with the legend  $M.OCI$  /  $III.VIR$  (no. 4), is common, but relatively less so.<sup>38</sup> The two issues are very similar in style and must be of roughly the same date. Both of the Paestan prototypes (nos. 4 and 5) occur in the Tiber<sup>39</sup> and the Liri.<sup>40</sup>

### The Ebusan Prototypes

Campo (1993, 154–155) dates her group XII to the period of the Second Punic War (c. 214–200 BC), and her group XVIII to the second century BC. This wide range of dates for the prototypes provides little absolute evidence for the dating of the imitative issues. The next of her main groups is XIX, which she dates to after 91/90 BC.<sup>41</sup> It is very common in Spain but rarely found in Italy, which suggests that the large flow of Ebusan coin to Italy was over by then (Stannard 2005a, 62–63).

36. Cf. Crawford (1973, 91–93, no. 32 [n = 70]), like our no. 5, compared to Crawford (1973, 91, no. 31/1 [n = 23]), like our no. 4. See also Sallusto (1971), which he includes.

37. "Of the types which may be borrowed from Roman denarii, none need have a model later than Caesarian" (Crawford 1973, 100).

38. Frey-Kupper (1995, 47–48, nos. 2–8); Cantilena, Pellegrino, and Satriano (1999, 38, no. 124 [n = 30], compared to no. 123 [n = 10]), like our no. 4.

39. See n. 9 above.

40. For finds of Paestum, see appendix 2. The Liri database currently includes twenty-one canonical Paestan coins of all periods, including two of the issue of our no. 4 and three of our no. 5. There are three Pseudo-Paestan coins, all with the clasped-hands reverse.

41. Campo (1994, 48) derives the *terminus ante quem* for group XIX from its use of the Roman semiuncial standard, introduced by the *Lex Papiria*. Costa Ribas (2007, 98) suggests

### The Massaliot Prototypes

Massalia produced a variety of "petits bronzes" with an obverse head of Apollo and a butting bull reverse. Their dating has been the subject of much controversy. Michel Py's (2006, 177–349) full study of coins from excavation contexts at Lattes and other sites in southern France is an important advance in our understanding of this difficult material. Drawing on Georges Depeyrot's (1999) typology,<sup>42</sup> and taking into account the work of other scholars (e.g., Brenot 1990; Gentric 1987), Py proposes a relative order and loose dates (with a precision of several decades) for the various types, between the late third and the middle of the first centuries BC.<sup>43</sup>

Because the types are largely immobile, it is difficult to say which of the many minor Massaliot Apollo / butting bull types served as the prototype. At this stage, it seems most likely that the imitations derive from the variants with the short legend ΜΑΣΣΑ and from one to three letters in the exergue.<sup>44</sup> The archaeological evidence shows that the bulk of these coins were emitted in the last third of the second century BC.<sup>45</sup> Variants of these types were produced until the middle of the first century BC but differ in detail from the imitative types.<sup>46</sup> Further research may clarify the prototype or prototypes of the Pseudo-Massaliot coins.<sup>47</sup>

a date of c. 80 BC and that the issue reflects the establishment of a *foedus* between Rome and Ebusus.

42. The chronology derived from the analysis of archaeological contexts does not fundamentally contradict that proposed by Depeyrot (1999, 5–17) but puts it on a firmer ground and makes greater precision possible.

43. Py numbers his "petits bronzes de Marseille" (PBM) largely, though not entirely, by Depeyrot's (1999) type numbers. His conclusions regarding the different types and groups and their dating, which take into account both the archaeological evidence and earlier research, can be found as follows in Py (2006): PBM-29 and 30, 185–186; PBM-34 and 35, 193–194; PBM-39 and 40, 215–216; PBM-45, 46, 47, and 48, 234–236; PBM-50, 255–256; PBM-51 and 52, p. 257; PBM-53, 65, and 66, 301–303.

44. Py (2006, 216–236, PBM-45, 46, 47, and 48), which corresponds to Depeyrot (1999, 80–82, nos. 47–48).

45. Py (2006, 234): "L'abondance des attestations antérieures à la fin du II<sup>e</sup> s. av. n. è. suggère que ces émissions ont battu leur plein durant le dernier tiers du siècle, et l'on est en droit de supposer de manière corollaire que la masse des frappes au cours de cette période a été suffisante pour expliquer qu'un nombre conséquent de spécimens se retrouve dans les habitats tout au long du I<sup>er</sup> s. av. n. è." In his final chapter ("Conclusions"), Py proposes a wider dating (second half of the second century BC). See Py (2006, 1177, fig. 470).

46. Py (2006, 257–303, PBM-53 and 65–66). In these cases, for example, the bull's tail does not take the form of an S, as on the imitative pieces, but runs horizontally above the animal's back.

47. As far as we can judge, none of the pieces that Py illustrates are Pseudo-Massaliot. We have, as yet, not identified any such pieces from France.

Jean-Noël Barrandon and Olivier Picard have recently published a study of the Massaliot series, based on metal analysis, and date the small bronzes widely from c. 150–49 BC.<sup>48</sup>

There are no imitations of the later type, with an obverse head of Apollo left and a bull standing right reverse, which Py dates to between 80/70 and 60/50 BC.<sup>49</sup>

### Locating and Dating the Pseudomints

We have shown that Panormos and Paestum were imitated by a single pseudomint, as were Ebusus and Massalia. We can also show that the two pseudomints were separate. There are a number of stylistic similarities and differences. In both cases, there are crude and clumsy pieces, such as the rudimentary images of Bes in Stannard's groups VIII, IX and X,<sup>50</sup> but there are also some Pseudo-Ebusan/Massaliot pieces that are relatively close to their models, whereas Pseudo-Panormos/Paestum is generally clumsier, with borders of overly large dots. In both, there is the occasional phenomenon of reversed types. No. 18, for example, simply mirrors the image and the legend of the model (no. 1) and, with many Pseudo-Ebusan groups, Bes raises his left hand, rather than his right, as on the prototype (no. 30). This comes about because the engraver has copied mechanically and failed to invert the types on the dies, with the result that they appear the wrong way around on the coins. Both pseudomints also extend into anomalous types not derived from the model: for Pseudo-Ebusus, groups III to VI and group IX; for Pseudo-Panormos, nos. 20, 23, 24 and 25, and 26.

48. Barrandon and Picard (2007, 114–116: “petits bronzes de la seconde période”). The authors derive their date from the initiation of the use of “cuivre gris” of high antimony content (from tetrahedrite-tennantite ores), from which most of these pieces are struck. They appear not to have taken Py (2006) into account when considering the dating of Massaliot bronze, although they mention it for one find context (Barrandon and Picard [2007, 115, n. 34]).

49. Py (2006, 350–357, PBM-67 and 68 = Depeyrot [1999, 103–104, nos. 67 and 68]), which he dated to after 70 BC. He notes that some scholars have attributed them to Nîmes or more generally as “émissions péri-massaliètes.” He suggests that only part of type PBM-67 may have been produced at Nîmes, namely those coins similar in style to its coins “au sanglier” with the legend NAMA/ΣAT (PBM-67-1). Others, he suggests, are closer in style to Massalia proper (particularly those with Λ in the exergue). “Cependant cette supposition se heurte au fait que toutes les variantes sont attestées dans la plupart des zones, ainsi que dans la colonie marseillaise d’Olbia.” See Py (2006, 354–356). Barrandon and Picard (2007, 99–100) list these pieces as their issues 95–98, at the end of the “petits bronzes.” On their plates, however, two specimens only are illustrated, as issues 72 (Bibliothèque nationale 1866) and 79 (Bibliothèque nationale 1864), which should be butting bull types.

50. When Pseudo-Ebusus groups are mentioned, they refer to Stannard (2005a).

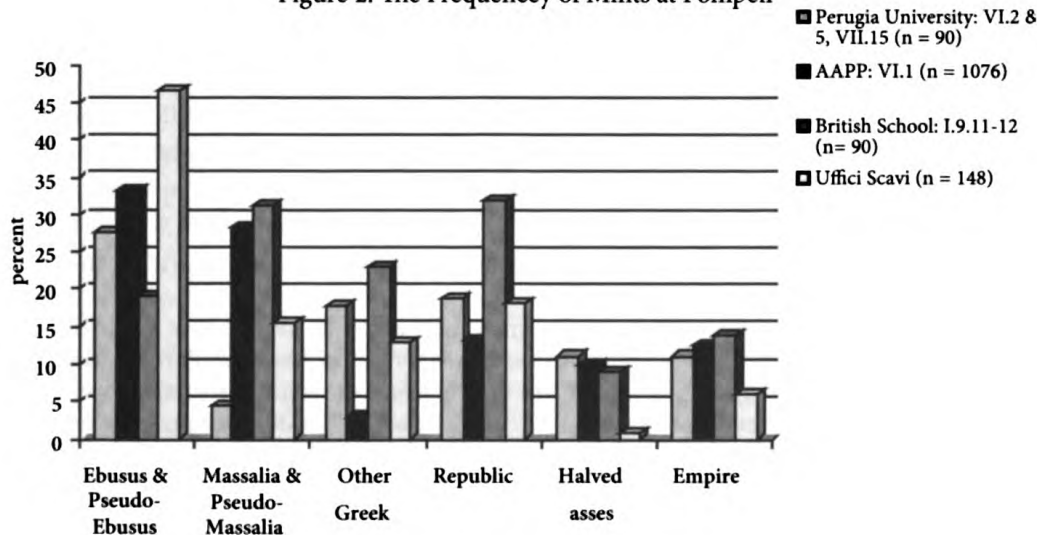
The two pseudomints do not share dies, and the diameters and weights of their coins are different. The coins of Pseudo-Panormos/Paestum are 15 mm to 18 mm in diameter and weigh between about 2.25 g and 3.75 g. Those of Pseudo-Ebusus/Massalia can be as small as 10 mm and are seldom larger than 16 mm, with weights ranging between about 1.15 g and a maximum of about 2.55 g; most are considerably lighter. It is significant that whereas the legends on Pseudo-Panormos/Paestum are Latin and the lettering often defective, the legends on Pseudo-Massalia are Greek and the letters well formed. There are no legends on Pseudo-Ebusus.

Table 2. Frequency of foreign coins in the Liri database<sup>51</sup>

	%		%
Spain, excluding Ebusus	4	Other Italy	27
Ebusus	4	Sicily	12
Gaul, excluding Massalia	2	Greece	11
Massalia and Pseudo-Massalia	9	Asia Minor	11
Pseudo-Ebusus	5	Carthage and Africa	11
Pseudo-Panormos	5	<b>Total</b>	<b>100</b>

There is also a clear distinction in the relative frequencies of the two pseudomints at Pompeii and in the Liri database, where we have information on large enough samples to make comparison meaningful. Table 2 shows the breakdown of coins in a sample of over 1,400 foreign (non-Roman) coins in the Liri database. Roman coins were not recorded. Figure 2 gives, for comparison, the breakdown of the coins (including Roman coins) from excavations below the AD 79 destruction

Figure 2. The Frequency of Mints at Pompeii



51. Derived from Stannard (2005a, 61–62).



layer, by the University of Perugia (Ranucci 2008), the Anglo-American Project at Pompeii (AAPP), and the British School at Rome (Stannard 2005b, 121: the House of Amarantus), as well as of the coins conserved in the Uffici Scavi at Pompeii (Stannard 2005b, 121).<sup>52</sup>

The overwhelming presence at Pompeii of the coins of Ebusus and Pseudo-Ebusus and of Massalia and Pseudo-Massalia stands out despite differences in these samples.<sup>53</sup> In the case of the AAPP coins, for instance, these issues together account for over 60 percent of all coins and for virtually all non-Roman coins. The insula excavated contained two commercial areas (Hobbs 2003, 377) from the late second century on, and these finds show that these coins formed the bulk of the small change at Pompeii at the time. By comparison, these coins are less common in the Liri, though still extremely common. Ebusan and Pseudo-Ebusan coins together make up 8.4 percent of the foreign material, the second largest number of coins from any single polity, after Neapolis (Stannard 2005b, 120). As at Pompeii, Massaliot and Pseudo-Massaliot material is also present in quantity, with the third largest number of coins (8.4 percent). The absolute preponderance of these issues at Pompeii, and the fact that a number of the types have so far only been found there, suggests that Pseudo-Ebusus/Massalia should be attributed to Pompeii or at least to the area.<sup>54</sup> In this case, the coins in the Liri database would have reached Minturnae from Pompeii.

At both Pompeii and at Minturnae, about half the “Ebusan” coins are imitations: in the Liri database, 49 percent; in the AAPP excavations, 48 percent; in the British School excavations, 48 percent; and in the material conserved in the Uffici Scavi, 32 percent (Stannard 2005b, 124).

The coins from the votive well at Gragnano (Privati di Stabiae) (Cantilena 1997) contain a relatively low ratio of imitative to canonical Ebusus (9 percent). The excavators associate the well’s closure with Sulla’s campaigns in the area in 89 BC, when Pompeii fell to the Romans and Stabiae was razed.<sup>55</sup> Stannard (2005b, 124), who examined this material, found no post-*Lex Papiria* Roman coins, that is, coins later than 91 BC. This could imply a *terminus post quem* for the

52. We thank Samuele Ranucci, Richard Hobbs, and Andrew Wallace-Hadrill for this information.

53. This pattern is visible even in small samples: for example, in the as yet unpublished 2002–2004 Geneva University excavations *extra muros* near the Terme di Porta Marina, at Pompeii, studied by Frey-Kupper, which are mainly from below the destruction layer: six Pseudo-Ebusus, one Pseudo-Massalia, one Pseudo-Ebusus or Pseudo-Massalia, one Neapolis, one Punic, three Roman republican, five Roman Empire. For a preliminary report of the excavations, see Hernandez (2005).

54. There are no other large site finds from the Vesuvian area on which to base a more definitive decision.

55. The excavation materials have yet to be published in detail.

closure of the well, and that the Pseudo-Ebusan issues reached their apogee in the late 90s and early 80s BC.

It seems clear that Pseudo-Ebusus and Pseudo-Massalia were contemporary: they are, for example, found together in the bathhouse purse hoard from Pompeii Insula VIII.5.36, probably of the early 80s BC (Stannard 2005b, 122), a date compatible with that of the possible prototypes (the last third of the second century BC). The fact that the Massaliot Apollo / bull standing right types (80/70–60/50 BC) are not copied suggests that the imitations were earlier than this and supports a date for them in the late second or early first century BC. We have, however, no sure evidence for when Pseudo-Ebusus/Massalia ceased production and hope that this will eventually be resolved through stratified archaeological materials.

In the case of Pseudo-Panormos/Paestum, the relative frequencies at Pompeii and Minturnae are reversed: while there are very few specimens of Pseudo-Panormos<sup>56</sup> and Pseudo-Paestum<sup>57</sup> from Pompeii, they are common at Minturnae: the canonical Panormitan model accounts for 1.3 percent of the foreign material, Pseudo-Panormos for 3.3 percent, and Paestum and Pseudo-Paestum together for 1.9 percent. Although the proportion of Panormitan and Pseudo-Panormitan coins in the Liri at Minturnae is much lower than the massive presence of Ebusus, Massalia, and Pseudo-Ebusus/Massalia at Pompeii, allowance must be made for far larger relative numbers of foreign coins at Minturnae and for the Pseudo-Panormitan/Paestan group being smaller than the massive Pseudo-Ebusan/Massaliot group. It therefore seems reasonable to attribute Pseudo-Panormos/Paestum provisionally to Minturnae while awaiting comparative material from other sites.

The imitations are tightly die linked.<sup>58</sup> The linking pattern suggests a die box, from which reverse dies were taken occasionally, rather than the sequential use of the reverse die to destruction, which would be consistent with their having been made in a relatively short period. In dating Pseudo-Panormos/Paestum, we need to take a number of factors into account: the dates of the two prototypes and the imitations' probable period of production. The Panormitan prototype, as we have seen, dates to c. 130/120–90 BC. In Sicily, by the middle of the first century BC, it was being replaced, as a major constituent of the circulating *aes*, by numerous later issues.<sup>59</sup> Allowing for a time lag for the coins to travel from Panormos to central Italy, the copying could have begun a decade or more after the issue ended

56. In the House of Amarantus coins, there is one Pseudo-Panormitan coin (ID 68; Season 98; Room 11.4; Context 1015) that shares both dies with our no. 22, and one canonical Panormitan warrior-and-ethnic piece (ID 59; Season 95; Room 11.5; Context 163).

57. In the AAPP coins, there are two clasped-hands pieces, one Pseudo-Paestan (2005, 507, 28, 19) sharing at least an obverse die with our nos. 13 and 14 and one probably canonical (2001, 168, 4, 2).

58. See Stannard (1998, 220–222, nos. 57–80, pl. 33).

59. See n. 30, above.

in Sicily. The Paestan model, however, would appear to be copying Roman types (clasped hands), which Crawford dates to 48 BC and to 42 BC.<sup>60</sup> The period we need to bridge in thinking through the dates of the imitations, even if we assume that Pseudo-Panormos closely followed the date of the prototype, need be no more than two or three decades. For the moment, it seems best to assume that the whole issue was made in the 40s BC, but this is crucially dependent on the dating of the Paestan model. In any case, it appears almost certain that Pseudo-Panormos/Paestum is later than Pseudo-Ebusus/Massalia, which reinforces the supposition that they are separate phenomena.

### The Circulation Pattern of Ebusus and Pseudo-Ebusus and of Massalia and Pseudo-Massalia

Pseudo-Ebusus is a wholly Italian phenomenon. It is not found in the Balearic islands<sup>61</sup> or on the Spanish mainland, as demonstrated by its absence or rarity in the copious material assembled by Campo (1976), mostly from Spanish museums and collections. Where Campo does list Pseudo-Ebusan issues in her corpus,<sup>62</sup> there are very few specimens, and these are cited from non-Spanish collections. We also monitored the Iberian coins on sale on eBay, Spain, over two years: while many Ebusan coins were offered, none were Pseudo-Ebusan.

Ebusus and Pseudo-Ebusus are widely found together in Italy and Sicily (Fig. 3), though never in such quantities as at Pompeii and Minturnae.<sup>63</sup> The relative number of canonical to imitative coins is difficult to establish because of small samples, because the understanding of the imitative issues is recent, and because very few specimens have been illustrated in publications. Campo (1993, 163) cites finds of "Ebusus" in Italy from: Mirabella Eclano/*Aeclanum*<sup>64</sup> and San Felicità (Rocca San Felice),<sup>65</sup> in the Irpino; Pietracatella,<sup>66</sup> in the Molise; Ortona

60. 48 BC: *RRC*, 466, no. 450/2 and 467, no. 451/1, both with two clasped hands holding a winged caduceus. 42 BC: *RRC*, 504, no. 494/10–12, and *RRC*, 508, no. 494/41, both with two clasped hands holding winged caduceus.

61. Santiago Padrino Fernández kindly confirmed this, in a letter of June 2, 2008: "With respect to the Pseudo-Ebusan coins in Eivissa, according to what I know about Ebusan material in the Museu Arqueològic d'Eivissa i Formentera, I don't remember the existence of this kind of piece there. Neither have I been able to find them in private collections, shops, or markets in the island in which coins are sold."

62. As Ebusan: when Campo wrote, the existence of Pseudo-Ebusus had not yet been recognized.

63. Campo (1976) also lists many finds from the Balearic islands, Spain, southern France, and North Africa ("Descripción de los hallagos," 63–83, with a map on 82).

64. Grella (1980–1981, 224–225): Pseudo-Ebusus, group VIII.

65. Grella (1983, 165): canonical, Campo (1976, group XVIII).

66. Stazio (1955, 43 and pl. III, no. 5): canonical, Campo (1976, group XVIII).

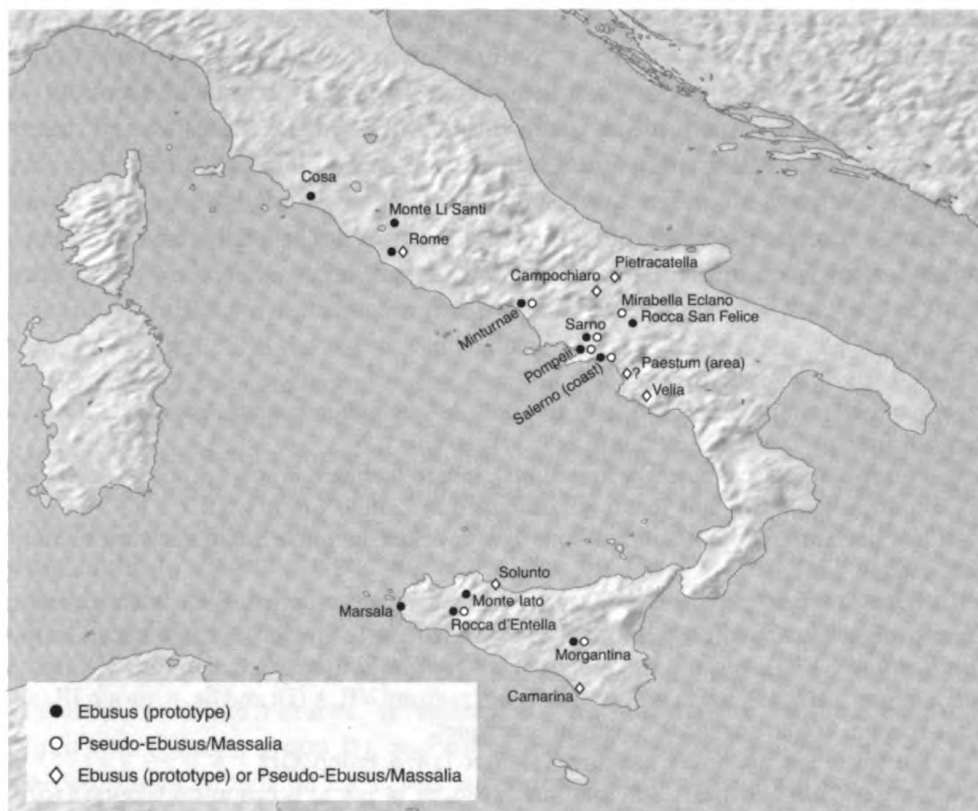


Figure 3. Finds of Ebusus and Pseudo-Ebusus in Italy and Sicily.

(Foggia);<sup>67</sup> Sarno;<sup>68</sup> the Sallusto collection, formed in the Paestum area<sup>69</sup> (but not necessarily from there, as Cantilena denies the presence of Ebusus at Paestum);<sup>70</sup>

67. Travaini (1991, 197): canonical, Campo (1976, group XII).

68. Catalli (1971–1972, 315) and Libero Mangieri (1990b, 207–208): canonical, four Campo (1976, group XVIII) and one Campo (1976, group XVIII, 51; one Pseudo-Ebusus, group VIII).

69. Libero Mangieri (1990b, 207, n. 13): eight undescribed pieces.

70. Cantilena, Pellegrino, and Satriano (1999, 150): “Al di fuori delle serie di Roma e dei piccoli nominali di Paestum e di Velia, sono assenti in II secolo a.C. le monete di altre zecche. Stupisce, ad esempio, la quasi totale mancanza di monete di zecche ispaniche e galliche, non rare in questi anni in ambito italico. A Paestum finora sono attestate una moneta in bronzo da Emporion e una da Carmo Baetica, mentre non risultano circolanti le monetine in bronzo di Ebusus di fine III-prima metà del II a.C. [these dates should be corrected downward] assai abbondanti, invece, in Italia meridionale e soprattutto in area vesuviana e sorrentina. Il dato va interpretato forse come il segnale dell’estraneità della colonia latina al

Velia,<sup>71</sup> Pompeii;<sup>72</sup> the Salerno Coast;<sup>73</sup> Rome;<sup>74</sup> and Cosa.<sup>75</sup> From Sicily, she cites Serra Orlando/*Morgantina*,<sup>76</sup> Solunto/*Solus*,<sup>77</sup> and an uncertain find.<sup>78</sup> To these we can add, from Italy: one piece from the temple of Hercules at Campochiaro<sup>79</sup> and two pieces from Monte Li Santi-Le Rote/*Narce*;<sup>80</sup> many from Gragnano, Minturnae, and Pompeii; and several from the Roman *Sottosuolo*.<sup>81</sup> We have also seen specimens in collectors' hands, said to come from Ostia and from north of Rome, along the Via Aurelia. In Sicily, we have documented coins from four further places: four from Marsala/*Lilybaion*,<sup>82</sup> one from

movimento di uomini e beni collegato ai traffici dei *negotiatores* con la Spagna e la Provenza, assai attivi in Campania meridionale nel II secolo a.C."

71. Two specimens (canonical or imitations), Libero Mangieri (1993, 29, no. 14, described as Campo, group XVIII; and 36, no. 52, described as Campo, group I, 1).

72. Not in Campo (1993), but Campo (1976, 65) cites the purse hoard analyzed in Stannard (2005b, 122).

73. Travaini (1991) republishes fifteen late nineteenth century finds by Padre Gaetano Foresio, eight illustrated on p. 195, here reclassified. Fig. 2 is probably canonical Campo (1976, group XVIII), and the rest are probably Pseudo-Ebusan: fig. 1, group II (?); figs. 3 and 4, group VII, 5 (?); fig. 6, group VIII, 1; fig. 7, group VII, 5 (?); and fig. 8, group III, 5.

74. Travaini (1991, 197, n. 13): "various examples."

75. Buttrely (1995, 39, no. 1): canonical, Campo (1976, group XII).

76. Buttrely, Erim, Groves, and Holloway (1989, pl. 9, no. 2) is canonical Campo (1976, group XIII), and no. 3 is Pseudo-Ebusus (Stannard 2005a, 71–72, no. 75, group VIII, 7).

77. Citing (after Campo 1976, no. 72b) Tusa Cutroni (1961, 121).

78. Citing (after Campo 1976, no. 72a) Tusa Cutroni (1956, 211). We do not include this coin in Fig. 3, as its provenance is uncertain. It is in a group of coins of "provenienza sconosciuta" acquired by the Museo Regionale di Palermo in 1896 (GE 2291) and seen there by Frey-Kupper. This contains the core of a hoard of Romano-Sicilian coins. Other coins, among them this Ebusan piece, a coin of Panormos under Augustus, and a medieval coin, seem intrusive. See Frey-Kupper (forthcoming, part 3, appendix 1, no. 24).

79. See Nassa (1999), citing various authors, including Di Iorio (1997, 35): one "Ebusus" among 730 excavation coins.

80. Benedetti, Catalli, and De Lucia Brolli (1999, 57, no. 1 [canonical Campo 1976, group XVIII] and 58, no. 9 [like our no. 35]).

81. R. Alföldi (1991, 34): "Auffallend stark sind auch die Stücke mit dem Bild des Gottes Bes vertreten (Abb. 35), die wohl von der Baleareninsel Ebusus-Ibiza stammen." The piece illustrated is canonical (Campo 1976, group XVIII).

82. Frey-Kupper (1999, 448–449, no. 168), from T. 58 Via De Gasperi. Probably Pseudo-Ebusus, Stannard (2005a, Group I, 1); this rare piece is known in two specimens only, this one and one in Berlin. Also Frey-Kupper (1999, 449, no. 172) from T. 162a Via Berta, p. 452, no. 178 from T. 47 Via De Gasperi, 453–454, no. 189 near T. 88 Via de Gasperi (all canonical, Campo 1976, group XVIII).

Monte Iato/*Iaitas*,<sup>83</sup> four from Rocca d'Entella/*Entella*,<sup>84</sup> and one from Camarina/*Kamarina*.<sup>85</sup>

We need to address the fact that half the "Ebusan" material, both at Pompeii and in the Liri database, is canonical; that the model and the imitation circulated together; and that (like the Pseudo-Ebusan coins) the number of canonical Ebusan coins at Pompeii is absolutely much larger than anywhere else. There is, as yet, no evidence that commerce between Pompeii and Ebusus can have been so uniquely important as to lead to Pompeii receiving such proportionally larger numbers of Ebusan coins. Nor are any military events known that might have brought large numbers of these coins to Pompeii. Did they arrive sporadically, or was there a single transfer of a block of circulating coin from Ebusus, in some as yet unknown way, in the late second or early first century BC? In that case, they would reflect the structure of the circulating medium in Ebusus at the time, containing mostly the latest issues but also a few residual, earlier pieces, and, in fact, only 6.5 percent of the pieces studied at Pompeii date to before c. 200 BC (Stannard 2005b, 124). This might, of course, simply reflect differential trade flows over time, but the lack of specimens of Campo's large first century BC group XIX, when there is evidence of continued trade between Ebusus and central Italy,<sup>86</sup> reinforces the possibility of a single transfer.

Py (2006, 685–688) has reviewed the presence of Ebusan coin at Lattes and elsewhere in southern France. There are few coins of the period before the Second Punic War (Campo group II). Second-century BC coins (Campo group XVIII) are commoner, which he interprets as evidence of intensifying maritime trade. This is reinforced by infrequent but consistent finds of Punico-Ebusan amphoras at Lattes. Campo group XVIII coins are found mainly in the lower Rhône valley, and more in Provence than in the Languedoc. (We have not examined any for this material for the possible presence of Pseudo-Ebusan pieces.) Coins of the first century BC (Campo group XIX) are commoner still, but finds concentrate in the west, in the Roussillon, the Aude valley, and at Toulouse, which suggests they came by land from Spain. The large presence of these coins in southern France is the main divergence from the pattern of finds in central Italy.

83. Frey-Kupper (forthcoming, no. 1, pl. 1) (canonical, Campo 1976, group XVIII).

84. Two canonical coins (Inv. E 3904 and E 3907, as Campo 1976, group XVIII, 127–130, nos. 50–60 and 62–70) and two pseudocoins (Stannard 2005a, Group IV, 2 [no. 58, head of Apollo/Bes] and VI, 1 [no. 62, bull butting right / eagle]). See also Stannard (2005a, 68, n. 73) and the documentation of the coin finds from Rocca d'Entella by Frey-Kupper.

85. Canonical or imitation, Lucchelli and Di Stefano (2004, 69, no. 1) (described as Campo, group XVIII, of 1.84 g, "usurato," and not illustrated).

86. Costa Ribas (2007, 94): "The presence on Ibiza of Italian 'Campanian' black glaze ceramics (mostly late A and B), Italic and E Mediterranean wine amphorae, thin-walled vessels, and many pointed *unguentaria* illustrates how Roman trade gradually took over," in the first century BC.

A further question is whether the canonical material traveled with the imitations from Pompeii to other sites where it is found, or whether it arrived (at least in part) directly from Ebusus. This could be tested if we were able to study the ratio of canonical Ebusus to imitations in statistically adequate samples from different sites. A significantly higher ratio of canonical to imitative coins would indicate a separate influx of material from Ebusus. The very similar ratios of canonical Ebusus to imitations, in the Liri database and at Pompeii, suggest that they traveled together, which further reinforces the likelihood that the canonical coins arrived in Pompeii as a single transfer from Ebusus.

In the case of Sicily, we think it probable that most of the canonical Ebusan pieces arrived from Italy with the imitations rather than from Ebusus directly. This is conjectural without more solid evidence. The direct arrival, in both Italy and Sicily, of some individual coins from Ebusus is anyway probable. An Ebusan amphora from Marsala<sup>87</sup> testifies to occasional imports of wine from Ebusus. A study of amphorae and other goods from Ebusus or Spain, to parallel the numismatic data, would be a useful way to know more about contacts between the Balearic islands and Italy and Sicily. Unfortunately, there is, as far as we know, as yet no systematic database of provenanced finds of amphorae and ceramics from the late republican period in Italy and Sicily.<sup>88</sup>

The Massalia/Pseudo-Massalia complex in Italy has not yet been studied in sufficient detail to be able to ask similar questions of it, in particular, how large numbers of Massaliot bronze coins reached central Italy and whether this was part of the same phenomenon that brought the Ebusan coins to Italy.<sup>89</sup> There were clearly relations between the important trading center of Massalia and the Spanish mainland and Ebusus. Massaliot and Ebusan bronzes have been found together in Spain,<sup>90</sup> and Ebusan bronze has been found at a number of sites in the hinterland of Massalia (Campo 1976, 63–83; Py 2006, 684–688). While it could be hypothesized that Ebusan and Massaliot coins traveled together to central Italy,

87. Bechtold (1999, 163), from tomb T. 6 of the Via Berta, dated to the last quarter of the first century BC, though a date in the early first century BC is not excluded (information kindly provided by Babette Bechtold).

88. We are grateful for discussions regarding ceramics with Babette Bechtold (Graz), Verena Gassner (Vienna), Marie-France Meylan Krause (Avenches), Marek Palaczik (Zurich), and Samuele Ranucci (Perugia), who are working on materials found at Rome, Pompeii, Velia, Sicily, Eretria, and Carthage.

89. Stannard is gathering material for such a study.

90. Ibáñez and Blanco (1995) describe a hoard, from Cuenca, of fifty-six Massaliot bronze coins (Depeyrot [1999, 85–86, no. 53]; for the hoard, see also Py [2006, 301]) and one Ebusan (Campo 1976, group XVIII), both of types imitated at Pompeii. The authors note that, though there are frequent finds of Massaliot silver in Spain, bronze is rare.

there is no specific evidence for this, and we do not yet assume this to be the case. It would also seem likely that the intense Roman commercial and military contacts with southern France in this period would have independently brought quantities of Massaliot small change to central Italy. It is possible that Pseudo-Massaliot coins also flowed back to southern France, but we have as yet no evidence of this.

Our initial impression is of a different pattern in the finds of Ebusan and of Massaliot coins from Pompeii and Minturnae, which will need to be factored into further analysis of the question. While, for Ebusus, coins of after 91 BC (Campo 1976, group XIX) are extremely uncommon at both sites, and while Massaliot Apollo left / bull standing right coins<sup>91</sup> of 80/70–60/50 BC and the dumpy post-49 BC issues<sup>92</sup> are very uncommon at Pompeii,<sup>93</sup> both are relatively common at Minturnae. At the same time, it would also appear that the ratio of Pseudo-Massalia to canonical Massalia is considerably higher at Pompeii than at Minturnae. These facts would seem to suggest a continued flow of coin from Massalia to Minturnae but not to Pompeii after the Pseudo-Ebusus/Massaliot coins were made, which overlays the flows from Pompeii to Minturnae and complicates the analysis.

#### The Circulation Pattern of Pseudo-Panormos/Paestum

For Pseudo-Panormos/Paestum (Fig. 4), the southernmost reported finds are at Morgantina.<sup>94</sup> These pieces are extremely rare in Sicily: the two from Morgantina are part of excavation finds of some 10,000 coins.

Some coin finds from excavations at Paestum have recently been extensively described (Cantilena, Pellegrino, and Satriano 1999),<sup>95</sup> but these do not include specimens of this pseudomint. The Sallusto collection, which he formed at Paestum, does contain a number of Pseudo-Paestan pieces, but as pieces were brought from the market, it is possible that dealers brought them in from elsewhere. There are only three cited coins from Panormos and, if Pseudo-Paestum were present in quantity, we would expect even larger numbers of Pseudo-Panormos. The presence or otherwise of Pseudo-Panormos/Paestum in site material at Paestum deserves further study.

91. Py (2006, 350–357, PBM-67 and 68 [Depeyrot 1999, 103–104, nos. 67 and 68]).

92. These characteristically crude pieces, with a variety of types, are usually struck on flans of about 11 mm, often as thick as 4 mm; Py (2006, 357–365, PBM-69 to PBM-90); Depeyrot (1999, 105–111, nos. 69–88); Barrandon and Picard (2007, 109–111, nos. 99–110).

93. There are none in the AAPP finds, and there are none among the twenty-three Massaliot coins conserved in the Uffici Scavi at Pompeii (Stannard 2005b, 121–122).

94. Buttrey, Erism, Groves, and Holloway (1989, pl. 24, no. 264, with the obverse die of our nos. 6 to 10, and there are twenty-six canonical Panormitan coins of all periods, and pl. 10, no. 26, with the obverse die of our no. 17, and there is only one canonical Paestan piece, *Paestum* 3a, of c. 280–240 BC).

95. The coins are not illustrated, and we have not seen the material.



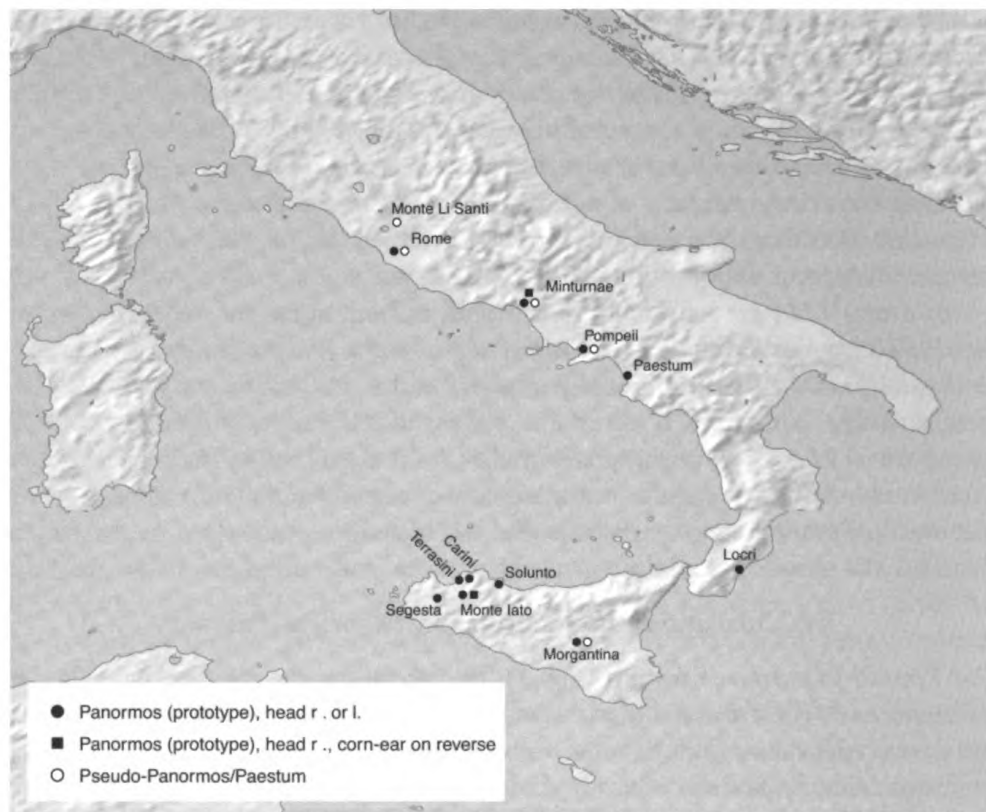


Figure 4. Finds of Panormos and Pseudo-Panormos/Paestum in Italy and Sicily

Both the canonical Panormitan model and the imitations are common in the Liri database, as we have seen, at a ratio of about 1:3, respectively. They are very infrequent at Pompeii. The AAPP materials contain no imitations of Panormos, one Pseudo-Paestan coin,<sup>96</sup> and one canonical piece.<sup>97</sup> Table 6, in Appendix 1 of this paper, shows that Paestum, Panormos, and Pseudo-Panormos/Paestum are all common in the Tiber.<sup>98</sup> There are specimens from Rome in the *Sottosuolo* material,<sup>99</sup> as well as a piece from recent excavations in San Isidoro in Rome (Travaini 1996–1997, 412–413 [given to Panormos]). We have also seen specimens of Pseudo-Panormos in collectors' hands, said to come from Ostia and from north of Rome along the Via Aurelia. This northern penetration of Pseudo-Panormos is confirmed by the finds at Monte Li Santi-Le Rote/Narce, in the *Ager Faliscus* (Table 3).

96. AAPP 2005, 507, 28, 19, which shares an obverse die with our nos. 13 and 14.

97. AAPP 2001, 168, 4, 2.

98. For the Tiber, see Frey-Kupper (1995, 48–50, nos. 9–10, 16–18).

99. Frey-Kupper counted at least twenty-two specimens beside at least four canonical coins.

Table 3. Frequency of foreign mints at Monte Li Santi-Le Rote/Narce<sup>100</sup>

<b>Spain</b>		<b>1</b>	
	Ebusus		1
<b>Campania</b>		<b>13</b>	
	Pseudo-Ebusus/Massalia?		1 <sup>101</sup>
	Pseudo-Panormos		2 <sup>102</sup>
	Neapolis		9
	Suessa		1
<b>Calabria</b>		<b>1</b>	
	Rhegion		1
<b>Apulia</b>		<b>1</b>	
	Arpi		1 <sup>103</sup>
<b>Sicily</b>		<b>1</b>	
	Syracuse?		1
<b>Macedonia</b>		<b>1</b>	
	Amphipolis		1
<b>Unknown</b>		<b>2</b>	
	Possibly Central Italy		1
	Other		1 <sup>104</sup>
<b>Total</b>		<b>20</b>	

### The Role of Imitative Issues in the Economy of Central Italy

The phenomenon of imitative coinages in central Italy in the late Republic is more widespread than has previously been recognized. It seems to reflect a growing need for small coin in an increasingly monetized economy in the towns of central Italy, over the period that runs from c. 100 BC until Augustus's new *aes* coins reached them. Paestum and Velia were the only mints striking in their own name at this

100. Benedetti, Catalli and De Lucia Brolli (1999); there are also 110 Roman coins and twenty-five illegible pieces.

101. *Ibid.*, 58, no. 9, given as Neapolis, but probably Pseudo-Ebusus/Massalia, of the types of our no. 35: Bull butting right / Toad.

102. *Ibid.*, 60, no. 15, misattributed as Epiros, King Ballaios (?), and no. 16, misattributed as the Aetolian League (?) = our no. 25. On p. 52: "Peccato non poter confermare, a causa del cattivo stato di conservazione, l'identificazione del pezzo presunto di re Ballaeus . . . e dei pezzi di Panormus e della lega etolica." The coins cited are from "unità stratigrafica 22." "I materiali votivi e ceramici contenuti nello strato si datano tra la fine del IV e il II sec. A.C., in accordo con i dati forniti dai reperti numismatici" (57): our dating of Pseudo-Panormos brings the terminal date for these finds down to the late first century BC.

103. *Ibid.*, 60, no. 18; listed as "zecca magno-greca" = SNG Cop., *Italy*—Sicily, no. 611; *HN, Italy*, 77, no. 644.

104. We are unable to identify the coin (*ibid.*, 59, no. 12) described as Panormos.

time,<sup>105</sup> and the supply of new Roman coin was deficient, as Rome did not strike bronze after the abandonment of Sulla's attempt to reintroduce a heavy copper *as* in 82 BC (RRC, 387, no. 368/1). Some deliberately halved and quartered *asses* of the 90s and 80s in the Liri database speak of the need for small change.<sup>106</sup> We illustrate two examples as nos. 41 and 42. Many imitations of Roman *quadrantes*—of varying degrees of verisimilitude—also circulated widely in central Italy.<sup>107</sup>

*Obv.* Laureate head of Janus; I above.

*Rev.* Prow right, on which stands Victory; L·PISO above; FRVGI below.

41 Æ 13 mm  $\searrow$  2.69 g RRC, 340–344, no. 340/4 of 90 BC

*Obv.* Laureate head of Janus; I above.

*Rev.* Three prows right, on which palm-branch; caps of the Dioscuri before; ROMA above; C·VIBI PAN below.

42 Æ 15 mm  $\leftarrow$  2.87 g RRC, 346–351, no. 342/7 of 90 BC

The preponderance of Ebusan, Massaliot, and Pseudo-Ebusan/Massaliot issues in the monetary stock at Pompeii shows that they were the mainstay of daily monetary transactions in the city. They were produced in huge numbers, particularly pseudo-Ebusan group VIII, 7 (no. 30). In the sample of about seventy pieces, Stannard was unable to identify any die identities, which suggests that the sample does not cover the original issue very thoroughly. Purely speculatively, to have an idea of values, we can hypothesize the issue as 70 pairs of dies, multiplied by 10,000 coins a pair, or 700,000 coins; if these are *quadrantes*, the total value would have been about 11,000 *denarii*.<sup>108</sup>

The AAPP excavations testify to the extensive use of minor bronze coinage in daily commercial transactions in Pompeii.<sup>109</sup> “*Tabernae*, which included cook

105. Crawford (1976–1977, 152): “The persistence of autonomous coinage at Paestum in the age of Tiberius appears less surprising than it once did in the light of the Velia hoard [Greco Pontrandolfo 1971–1972], in which 333 bronzes of Velia were associated with Roman coinage down to Augustus. The date when the last of these bronzes were struck is not precisely certain, but in any case not long before Augustus.”

106. These *asses* circulated for a very short period, and it is therefore likely that they were cut soon after issue. For the rapid loss of these semiuncial *asses*, see Burnett (1982, 126).

107. The Roman materials have not been collected or studied systematically, but many of the types listed by Crawford (1982, 142–163) are probably from the area. We suspect, as well, that many *quadrantes* with prow left are also central Italian imitations.

108. These arguments were first made by Stannard (2005b, 142).

109. The coins recovered from excavations cannot reflect the overall monetary stock in action, because people more easily tolerated the loss of small bronze than of precious metal, but the AAPP materials (like the other finds from Pompeii analyzed for Stannard 2005b) contain so many more bronze relative to silver coins that the preponderance of bronze is clear.

shops and wine bars, became more evident in the late Republic as well and were the basic source of daily staples. . . . It is likely that coins played an important part in supplying the urban poor with food" (Hollander 2007, 113–114). They were part of the larger monetary system, in which silver and bronze circulated at different speeds. Profits from such commerce would not have been retained in the bronze in which they were largely made but would have been consolidated by conversion into silver. Similarly, it would sometimes have been necessary to convert silver into bronze, for small change. In considering the economy of central Italian cities in the late Republic, we need to take into account this layered structure of the monetary stock.

Such low-value coins were not issued as a store of value and probably not merely to meet a polity's official obligations (which could theoretically have resulted in large numbers being struck to make up even small values). Their importance in the economy depended on the speed of circulation, that is, how frequently they were transacted, and the commercial exchanges they facilitated. To look at money supply only in the aggregate, that is, the overall value it represented, cannot adequately describe the quickening pulse of commerce, where small coins were passing ever more frequently from hand to hand, changing the economic structures of daily life. It is in this sense, we argue, that the economy was increasingly monetized and required increasing supplies of small change. Though this does not automatically tell us much about the growth in the overall money supply in coin of all metals and other stores of value and financial instruments, which is one factor that economists would like to recover, as a contribution to price history, it is likely that it also reflects a generally growing economy.

The bathhouse purse hoard at Pompeii (Maiuri 1950; discussed in Stannard 2005b, 122) shows that the bronze in circulation promiscuously included Ebusan, Massaliot, Pseudo-Ebusan/Massaliot, Roman, and sundry Greek coinage. The large quantities of diverse foreign bronze coins in the Liri database—including the Ebusan, Pseudo-Ebusan/Massaliot, and Pseudo-Panormitan/Paestan issues—as well as in other site finds, such as at Monte Li Santi-Le Rote/*Narce*, suggest that all available coin was pressed into service. These coins must therefore have been brought into some form of parity with one another, though how this was done may have varied from place to place. Outside their home market, coins were probably valued primarily on the basis of diameter. It seems unlikely that foreign markets would have been interested in—or even have known—the fiduciary value in their home markets of a plethora of minor foreign bronze, or that profits could be made in assembling blocks of foreign coin and returning them to their home market, which could, in theory, be a source of value.

The Roman minor denomination most commonly in use in the first part of the first century BC seems to have been the *quadrans*,<sup>110</sup> and it is possible that Pseudo-Ebusan/Massaliot pieces circulated at Pompeii at this value (Stannard 2005b, 142). The slightly larger, probably later, Pseudo-Paestan pieces, which—like their model—are value marked as *semisses*, might have been accepted as such.

The similarity of finds from the sites considered and the spread of imitative coinages throughout Latium and Campania also suggest that there was, in the late Republic, a relatively unified daily transactional economy in this area, at least between major towns.<sup>111</sup>

While precious metal could be carried from one place to another as a store of value, there would be no incentive to take bronze with one, unless there was the possibility of using it at destination. If a variety of coin was useable throughout central Italy, this would be possible.

We cannot generalize these comments to areas outside central Italy, as very many fewer foreign coins were present, for example, at Paestum (as shown in Table 4) and further south, as well as in Sicily, at this period. We think they apply, however, to an area containing at least Pompeii, Minturnae, Rome, and Narce.

The foreign coins, with the large number of types they constitute, allow one to draw inferences regarding similarities in the monetary stock in different places more easily than does the uniform coinage of the Roman republic. As Appendix 2 shows, several key mints in this analysis are, in addition to the “Ebusus” and “Massalia” complexes, Kos, with Samos, Chios, and Miletos; Elis, Thebes, and Thesbiai; Kyrenaika; and Apollonia and Dyrrhachion.

The patterns will become clearer as more information on large numbers of coin finds is brought together. It should then be possible to build up a finer-grained picture, which can take into account the specific patterns at individual sites and allow a better understanding of the flow of coin among them.

There is an important methodological corollary if foreign coin was often assimilated into a monetary stock that circulated over a wide area. In that case, one cannot simply treat a coin—or a large number of coins—of a foreign mint, found in a particular site, as an indication of direct contacts. The challenge is then to identify both the initial entry points for foreign coin and the pattern of their subsequent absorption into circulation.

At Paestum, local coins were struck until the reign of Tiberius and were by far the largest part of the monetary stock (70 percent), supplemented by Rome (24 per-

110. Crawford (1982, 140): “The imitations are for the most part *semisses* and *quadrantes*, which suggests a period after the *sextans* had ceased to be the smallest denomination in regular use and given way to the *quadrans*.” See also Burnett (1982, 134).

111. Though there were clearly differences of degree, with Paestum, for example, outside the main circuits of exchange.

cent) (Table 4). In Italy, only Velia also struck until the late Republic. The presence of Roman coin in Sicily at this time (including the *asses* of Sextus Pompeius) was also low (about 20 percent) (Frey-Kupper forthcoming, chap. 5.3, with fig. 88 and table 76). Moreover, many towns continued to strike coins in their name until the late Republic, and in many cases, its end: Akragas, Alaisa, Lilybaion and Segesta until Augustus, and Panormos (the last mint to close) until Tiberius.<sup>112</sup> The study of several Sicilian sites, mainly in the west (Monte Iato/*Iaitas*, Solunto/*Solus*, Rocca d'Entella/*Entella*, Segesta/*Segesta*, Tusa/*Alaisa*) but also Serra Orlando/*Morgantina*, shows that smaller cities generally supplied about 15 to 25 percent of their own coin needs and relied for about 30 to 40 percent on the coins of the nearest important mints, such as Panormos and Lilybaion in the west and Syracuse and Katane in the east. The coin of the Mamertines continued to circulate in many cities, sometimes making up 15 percent of the bronze monetary stock.

In the Greek areas of southern Italy and Sicily, then, local coin appears to have been sufficient for the needs of small change. In such circumstances, imitative coinage would have been superfluous. The rare examples found there would have come from Latium and Campania.

Table 4. Mints frequencies at Paestum: Greek and Roman *aes* coins (211–c. 30 BC)<sup>113</sup>

Spain	1	Sicily	5
Emporion	1	Katane	1
Italy	613	Panormos	3
Capua	1	Tyndaris	1
Brundisium	2	Macedonia	1
Copia	3	Autonomous issue	1
Paestum	578	Delos	2
Velia	26	Delos	2
Brettii	1	Rome, Republic	197
Petelia	1	AE	197
Rhegion	1	Total	819

### The Choice of Prototype and the Status of the Pseudomints' Coins

Why did neither Pompeii nor Minturnae strike in its own name, as Paestum and Velia did? This may simply reflect the fact that neither city had ever before struck in its own name (whereas Paestum and Velia had centuries of tradition behind them) and were not likely to begin to do so at a time when most civic mints in Italy had closed. In this context, there are in the Liri database a number of as yet unpublished anonymous issues, which may be attributable to Minturnae.

112. *RPC* I, 168–177; Frey-Kupper (forthcoming, part 1, chap. 4.6.2).

113. Cantilena, Pellegrino, and Satriano (1999).

Were the pseudomints informal and tolerated? One should not simply describe such pieces as “forgeries” or “fakes,” which are legal concepts implying that it was formally forbidden to make them, that people had to be tricked into accepting them, and that their makers would be punished as criminals. There is no such evidence, and one needs to be careful to not simply extrapolate backward from medieval or modern concepts.<sup>114</sup> Moreover, many of the types were clearly recognizable as not being of the cities they purported to copy. They were nonetheless accepted in commerce so could therefore not have been perceived as “fraudulent.” Consider, moreover, how the coins were put into circulation: the numbers were so large—and their individual value so low—that the clandestine passing of a piece or small number of pieces at a time into the monetary stock would not have sufficed to get them off the minter’s hands or make an acceptable profit.

If there were profits to be made, did the authorities try to capture them? We know from an honorific decree from Sestos of the late second-century BC that Greek city-states could issue bronze coins specifically to make money.<sup>115</sup> It is therefore possible, even probable, that Pompeii took all or some of the profits, if there were any. The most likely scenario is that they were handled in quantity by moneychangers under control of the civic authorities, in the context of breaking larger-value precious metal coins into smaller denominations for the needs of daily commerce.

The Sestos decree also gives civic pride, the setting of the emblem of the state onto coinage, as a reason for coinage. Why then did Pompeii not strike a city coinage? And why choose Ebusus and Massalia for copying, rather than Rome, the dominant power? There were obviously differences between Latium and Campania, and the east and Spain, where there were many functioning civic mints in the late Republic. One possibility is that Roman authorities were in some way capable of forbidding civic mints, which is patently not the case outside Italy. There is no evidence for this. It is also implausible that Rome would act to prevent the copying of Roman coins: in fact, it seems that imitations of Rome are more common at Minturnae (a Roman colony) than at Pompeii, as there are many closely or widely Rome-derived imitative issues struck over foreign coin in the Liri database (Stannard 1998, 210–212).

The use of Roman coinage in Latium and Campania and economic factors had already led to the closing of all city mints in the area. (Velia and Paestum belong to a separate cultural area, where Greek monetary traditions survived, as in Sicily.)

114. For a discussion of the role of imitative coinages and their status and of moneychangers in Roman times who handled them, see Peter (2004, esp. 26–29). See also Wigg-Wolf (2004, esp. 72–74).

115. *OGIS*, 339, lines 45–46; Louis Robert (1973, esp. 49–50). For a more recent edition of the text and for translation and comment, see Krauss (1980, 14–63, esp. 34–35). For numismatic comments on the law, see, for example, Meadows (2001, 59, 61); Figueira (1998, 252, n. 90); Howgego (1995, 41).

It is possible that, at the time Pseudo-Ebusan and Pseudo-Massaliot coins were made, the economy of Pompeii was still relatively independent of Rome and that the coins of Ebusus and Massalia were accordingly more common than those of Rome and had already been assimilated into the monetary pool.<sup>116</sup> The imitative issues may then simply have topped up the supply of these types, and it may be significant that only the smallest coins were involved.

While it is also hypothetically possible that the choice of foreign mints to imitate reflects the anti-Roman position of Pompeii in the Social War, the more banal explanation seems, on balance, the more likely. This reasoning will not apply to Pseudo-Panormos/Paestum at Minturnae, but that is a less massive and later phenomenon, which probably reflects trade contacts with western Sicily, and to a lesser extent with Paestum, in the 40s BC, as well as a penury of small change, with Rome no longer striking bronze, when the day-to-day use of foreign coinage had become commonplace.

The choice of the Panormitan prototype (the warrior and the ethnic reverse) presumably reflects its ample presence in Latium and Campania at the time, as shown in Table 1. This and the imitations themselves suggest more intense contacts between these areas and Panormos, and a more important role for its harbor, than previously supposed. At the time the prototype was struck—toward the end of the second or at the beginning of the first c. BC—Sicilian communities were becoming more autonomous in administrative matters.<sup>117</sup> It was a period of general prosperity and renewal likely accompanied by increased contacts with Italy and a more prominent role for Italian *negotiatores* in Sicily.

The choice of Paestum as a mint to imitate probably reflects the generally flourishing condition of the city in the first century BC: the large number of inscriptions from Paestum at the time attests to the activities of a large number of local magistrates and to an intense building program (Mello-Voza 1968, esp. 95–104 [*personaggi*] and 203–208 [*opere pubbliche*]). Paestum also produced a large number of coins in the Late Republic, signed both by local magistrates and by private persons—probably by members of the elite—who may have distributed them to the citizens (Crawford 1973, 50–55; Burnett 1982, 128–129; *CMRR*, 72).

Panormos and Paestum were both important centers whose coins were frequently seen in Latium and thus good models for imitative issues in these areas. The same familiarity with the coins of Ebusus and Massalia is probably behind their role as models in Campania.

116. If so, the subsequent spread of these coins to other regions may have become more important after the planting of the Sullan colony at the end of the Social War opened the economy more to the north.

117. Frey-Kupper (forthcoming, part 1, chap. 4.5.4), who suggests that this is a consequence of the *Lex Rupilia* of 131 BC.



### CONCLUSIONS AND PERSPECTIVES

The hypotheses that we have put forward draw on an increasing documentation and understanding of the changing monetary history and economy of the central Italian region, in particular as regards the production and movement of small local coinages and the role of small change arriving, for whatever reason, from a wide range of foreign mints in Italy, Sicily, and elsewhere. We hypothesize that this was, in the first century BC, a more unified monetary area than has so far been suggested. The probable attribution of Pseudo-Ebusus/Massalia to Pompeii in the early first century BC has made it possible to follow the spread of these coins from this center and draw certain conclusions, in particular that the similarity of finds of foreign coins throughout the area—which includes the imitative series that originated from Pompeii and later the Pseudo-Panormitan/Paestan material—suggests that small coins were circulating, throughout the area, with a monetary function. Concentrating on the foreign coins, with their large number of types, rather than on Roman coinage, which was more uniform, allows one to see such similarities in the movement of small change.

It now becomes important to integrate these ideas into a more general analysis. A first step could be to refocus on the Roman republican coinage and the overall monetary stock, with all its elements. The imitations of Rome, which in the nineteenth century were collected and studied, for example, by d'Ailly, were subsequently ignored as unimportant, until Crawford pointed out their economic importance (Crawford 1982, esp. 138–141). They deserve to be restudied, and we suggest that many of them circulated and possibly originated in southern Latium and northern Campania.<sup>118</sup>

The time is also ripe to focus more on the overall monetary and economic context than on the presence of coins from individual foreign mints, seen as examples merely of bilateral contacts. However, this will only be fruitful if more precise dates are available for the different issues of Italy and Sicily and the foreign issues entering Italy. Our discussion in appendix 1, of the overstriking of Kos in central Italy, shows the range of questions to be addressed if historical implications are to be drawn from them.

There is a compelling argument to move beyond the coins alone, in order to integrate information on other classes of objects, in particular, from stratigraphic contexts. This includes trade containers such as amphoras, trade goods such as fine ceramics, local wares, other indices of trade such as lead fiscal and commercial sealings, epigraphy, and the literary evidence. Such studies will only really be possible with an increasing collaboration between specialists in the different disciplines.

118. Crawford (1982, 140–141) suggested “Italy and the Romanised provinces of the Narbonensis and what later became Tarraconensis.” He did not exclude a production of some issues north of Rome.

## APPENDIX 1

### The Presence of Koan Coin in Central Italy, and Overstrikes on Kos

There is an interesting group of coins<sup>119</sup> struck over the Koan issue<sup>120</sup> that we illustrate as no. 43. The obverse overtype is Mercury, copied from Roman *sextantes*. Two pieces with a common obverse die share an eagle reverse (nos. 44 and 45): the images on the overstrikes are poor, but the eagle looks much like that on no. 26. A third (no. 46), with a stylistically similar obverse die, uses a Roman prow reverse, but it is self-evidently not a canonical *sextans*.

*Obv.* Three-quarters facing head of young Herakles in lion's skin, right.

*Rev.* Bow in case and club; ΚΩΙΩΝ above; magistrate's name below.

43 Æ 15 mm ✓ 3.37 g SNG Cop., *Caria*, nos. 677–682; Ingvaldsen (2002, issue XIX); Liri 11.070 (this coin)

*Obv.* Mercury wearing *petasus*, right; border of dots.

*Rev.* Eagle with wings spread, left; border of dots.

44 Æ 17 mm ↗ 3.09 g Paris Ailly 1044 (this coin)

*Obv.* Same as last; same die.

*Rev.* Same as last.

45 Æ 17 mm ✓ 2.97 g Paris Ailly 1046 (this coin)

*Obv.* Same as last.

*Rev.* Prow, left; border of dots. The coin is overstruck, but the undertype is unreadable.

46 Æ 17 mm ✓ 2.15 g Paris (this coin)

Coins of the same Koan issue are also used as flans in another group of central Italian issues: nos. 47 and 48, and nos. 49 and 50—each a pair of coins that shares an obverse die and links a shepherd and wolf and twins reverse with a prow reverse—are all overstruck Kos. The wolf-and-twins reverse is also used by two other issues, which we illustrate as nos. 51 and 52. All specimens that we know of the issue of no. 51 are struck over Roman *quadrantes* of the late second or early first century BC. The specimens of the issue of no. 52 do not seem to be overstruck.

*Obv.* Radiate head of Apollo, right; border of dots.

*Rev.* Wolf suckling twins, right; *Ficus Ruminalis* behind; the shepherd, Faustulus, to left; ROMA in exergue.

47 Æ 16 mm ↖ 2.60 g Paris Ailly 1283 (this coin)

119. Brought to our attention by Michel Amandry.

120. We thank Kerstin Höghammar, Håkon Ingvaldsen, Selene Psoma, and Vassiliki Stefanaki for helping us with Kos.

*Obv.* Same as last; same die.

*Rev.* Prow right.

48 Æ 18 mm ↖ 3.61 g Liri 100.120 (this coin)

*Obv.* Head of Mercury wearing *petasus*, *caduceus* on shoulder, right.

*Rev.* Same as no. 47; probably the same die.

49 Æ 16 mm ↘ 2.42 g Liri 100.087 (this coin)

*Obv.* Same as last; same die.

*Rev.* Same as no. 48.

50 Æ 16 mm → 2.51 g Kestner 2784 (this coin)

*Obv.* *Gryllos* formed of a Silenus head, right, and a beardless head, left, topped by a gryphon's head and wings; border of dots.

*Rev.* Same as no. 47.

51 Æ 18 mm ← 2.72 g Berlin 8212 IF (this coin)

*Obv.* Hercules and Antaeus; border of dots.

*Rev.* Same as no. 47.

52 Æ 15 mm ↑ 3.64 g BM SP plates 2873 2/1

If nos. 44 and 45 do, in fact, share the eagle-on-thunderbolt reverse type of no. 26, it is possible that they are part of the Pseudo-Panormos/Paestum group. This would date them to the 40s BC, if the date we suggest for Pseudo-Panormos is correct. Other factors suggest that a higher date is probable. The shepherd and wolf and twins reverse is copied from a denarius of c. 137 BC (*RRC*, 267, no. 235/1, *SEX.POM*), which gives an earliest possible date. Some of these coins use Roman *sextans* types (though without uncial value marks). This and the size of the flans suggest a second-century BC date. There seems, however, to be a contradiction with the contemporaneous use of Roman *quadrantes*<sup>121</sup> as flans for the issue of no. 51, because it would be very odd to overstrike and retariff *quadrantes* as *sextantes* (assuming that all these pieces were intended to be the same denomination). It may therefore be best to disassociate the date of the group struck over Kos from the date of the issues of nos. 51 and 52 and to suggest a date in the last quarter of the second century BC for the Kos overstrikes and a date in the first half of the first century BC for the others.

It remains possible that all these issues are contemporaneous (in which case the use of *sextans*-derived types is not significant), which would make possible a date in the first century BC, on the basis of the overstrikes. In this case, these issues could well be grouped with the Pseudo-Panormos/Paestum issues.

<sup>121</sup> Probably of the first century BC, as they seem quite light. The five weighed pieces we know average 2.91 g.

The presence in Italy of Koan coin of the late second and first centuries BC—and more generally coins from the Asia Minor coast of this period—is an important fact that deserves to be probed further. The Italian overstrikes suggest that, during the last quarter of the second century BC, specimens of the issue of no. 43 were reaching central Italy in large numbers, both absolutely and by comparison to other Asian mints of the period. They were present in large enough numbers to be preferentially used as flans for overstriking. They are found widely, including at Minturnae, in Rome, and to the north of Rome, but they do not yet seem to be attested at Pompeii.

Table 2, in the body of this paper, shows that coins from Asia Minor account for 11 percent of the large sample of non-Roman coins in the Liri database (these coins are also integrated, with other finds, in Appendix 2). Table 5 gives a breakdown of these coins, which are very largely of the second and first centuries BC. Kos—overwhelmingly, the issue of no. 43—is the most common Asia Minor mint, with Miletos a close second. The mints of Ionia and Karia and their islands are in general well represented: Ephesos, Chios, Samos, and Rhodos. The coins of Prusias II of Bithynia (182–149 BC) are also common, a testament to the intensity of Roman political and economic involvement with Bithynia.

Table 5. Coins of Asia Minor in the Liri database

<b>Bosporos</b>	1		<b>Karia</b>	4	
Phanagoreia		1	Bargylia		1
<b>Kolchis</b>	1		Mylasa		1
Dioskurias		1	Stratonikeia		2
<b>Pontos</b>	4		<b>Islands off Karia</b>	32	
Amisos		3	Kos		26
Kabeira		1	Rhodos		6
<b>Paphlagonia</b>	1		<b>Lydia</b>	3	
Sinope		1	The Kaystrianoi		1
<b>Bithynia</b>	13		Philadelphieia		1
Nikaia		1	Sardeis		1
Nikomedea		2	<b>Phrygia</b>	3	
Kingdom, Prusias II		10	Apameia		2
<b>Mysia</b>	5		Laodike		1
Adryamytteion		1	<b>Lycia</b>	3	
Kyzikos		1	Kragos		1
Parion		1	Masikytes		1
Pergamon		2	Phaselis		1
<b>Troas</b>	1		<b>Pamphylia</b>	4	
Assos		1	Aspendos		1
<b>Lesbos</b>	2		Side		3
Mytilene		2	<b>Pisidia</b>	4	
<b>Ionia</b>	30		Kremna		1
Ephesos		5	Isinda		1
Magnesia		2	Sagalassos		2
Miletos		20	<b>Cilicia</b>	3	
Phokaia		1	Korykos		1
Teos		2	Tarsos		2
<b>Islands off Ionia</b>	9		<b>Total</b>	123	
Chios		4			
Samos		5			

The Greek finds from the Tiber, listed in Table 6 (and included in Appendix 2, Table 8) suggest a similar picture, with a high proportion of coins from the Asia Minor coast (18.6 percent), and an overwhelming presence of Kos, followed by Samos. The Koan issue of no. 43 is also well represented in the material in *Sottosuolo* (R. Alföldi 1991, 34, fig. 38).

Table 6. Greek coins in the Tiber<sup>122</sup>

<b>Spain</b>	<b>1</b>		<b>Attica</b>	<b>1</b>	
Carthaginians		1	Athens		1
<b>Italy</b>	<b>17</b>		<b>Elis</b>	<b>1</b>	
Paestum		7	Zakynthos		1
Pseudo-Paestum		1	<b>Messenia</b>	<b>1</b>	
Pseudo-Panormos		4	Messene		1
Rhegion		5	<b>Argolis</b>	<b>2</b>	
<b>Sicily</b>	<b>53</b>		Argos		2
Akragas		7	<b>Pontos</b>	<b>1</b>	
Katane		1	Amisos		1
Alaisa		1	<b>Paphlagonia</b>	<b>1</b>	
Panormos		6	Amastris		1
Syracuse		32	<b>Ionia</b>	<b>8</b>	
Tauromenion		3	Klazomenai		1
Carthaginians		3	Miletos		2
<b>Sardinia</b>	<b>7</b>		Samos		5
Carthaginians		7	<b>Karia</b>	<b>13</b>	
<b>Illyria</b>	<b>2</b>		Kos		13
Apollonia		1	<b>Kyrenaica</b>	<b>1</b>	
Dyrrhachion		1	Kyrene		1
<b>Boeotia</b>	<b>3</b>		<b>Zeugitania</b>	<b>9</b>	
Thebes		1	Carthage		1
Thebes (?)		2	Carthage (?)		7
<b>Euboea</b>	<b>1</b>		Utica		1
Chalkis		1	<b>Total</b>	<b>122</b>	

The usual dating of the Koan issue of no. 43 is conventional (166–88 BC). The upper date derives from Rome's establishment of Delos as a free port under Athenian protection, to punish Rhodes for its ambivalent role in the Third Macedonian War. The lower is Mithradates VI Eupator's fleet's visit to Kos, on an expedition against Rhodes. Recent scholarship has proposed higher dates. Kerstin Höghammar (2007, 85–90) dates it to the early second century, drawing on Håkon Ingvaldsen (2002, 143–146, 324–343), who lists it as his issue XIX and dates it to 210–180 BC. During the issue, the ethnic changes from ΚΩΙΟΝ to ΚΩΙΩΝ, while the next bronze issue (XXI, with an obverse head of Asklepios and a club and serpent-staff

<sup>122</sup> Frey-Kupper 1995, with no. 9 re-attributed as Pseudo-Paestum, and nos. 10 and 16–18 as Pseudo-Panormos.

reverse, dated by Ingvaldsen (2002, 149–151, 349–359) to 190–170 BC,<sup>123</sup> which Giannikouri and Stefanaki (2006, 108–109) as well as Höghammar accept, with, perhaps, a slightly earlier beginning [Höghammar 2007, 88; Giannikouri and Stefanaki forthcoming]) uses only ΚΩΙΩΝ. The two issues are linked by shared magistrates' names. Whatever the issue dates, it appears that issue XIX circulated in the east until about 100 BC, in very worn condition and usually countermarked with a crab (Ingvaldsen 2002, 62). Its dating depends ultimately on finds in the Athenian agora, in two different contexts both until now dated to 230–190/180 BC (Höghammar 2007, 88, drawing on Kroll 1993, 49–50, 274, n. 62). One of these is the Middle Stoa building fill, the dating of which depends largely on the chronology of Rhodian amphora stamps (first published by Grace 1985). The relevant stamps have recently been dated down from c. 187–183/182 BC to c. 175/173 to 169/167 BC.<sup>124</sup> The consequences of this for the dating of the coins from the context cannot be discussed in detail here,<sup>125</sup> but 169/167 BC gives a *terminus ante quem* for the closing of the fill and for the loss of the Koan issue XIX coin (of the earlier type, with the ethnic, ΚΩΙΩΝ) found in it.<sup>126</sup>

There are also anomalies in the evidence of the Italian finds that need to be taken into account. Issue XIX is very common; issue XXI is very rare. The thirteen Koan pieces published by Frey-Kupper (1995, 68–70, nos. 100–112) from the Tiber are of issue XIX only. The twenty-six Koan coins in the Liri database (see appendix 2) break down as follows:

123. Giannikouri and Stefanaki (forthcoming) also discuss both issues in an unpublished study of a hoard discovered near the ancient well of Vourinna. We thank the authors for providing us the paper, which is also mentioned in Höghammar (2007, 88).

124. Finkielsztejn (2001, 123–125, 196, table 22, 1). Lawall (2002, esp. 319) independently reached the same conclusions. Rotroff (2006, 7–8) in discussing the dates of the plain wares accepts the new chronology. Höghammar (2007, 88) mentions Finkielsztejn's chronology but proposes the upper date of the period as closing date of the stratum.

125. Kroll (1993 [49–50]) fixed the end of his period II for the Athenian bronze coinage "by the great construction fill of the Middle Stoa in the Agora (Deposit H-K 12–14). The 189 identifiable coins excavated from the fill give a nearly complete run of the Athenian bronze from the middle of the fourth century down to the closing of the fill ca. 183 BC." He supposed that minting was interrupted at the end of period II and started again in period III in the 160s "presumably because continued production was judged unnecessary" (Kroll 1993, 50). Kroll has now accepted the implications of the downdating of the Rhodian amphora stamps for the dating of the Athenian bronze coinage, in a note cited in Rotroff (2006, 8): "With the closing of the Middle Stoa deposit lowered to 170/160, however, the lacuna vanishes, and we find the period III varieties following directly upon the latest varieties of period II."

126. Kroll (1993, 274, no. 958a [H-K 12–14]). The coin from the other context is no. 958b (also with the ethnic ΚΩΙΩΝ), "found with other coins, the latest being Athenian period II pieces of ca. 220s–190s BC and . . . Antiochos III, 223–187 BC."

Table 7. Koan coins in the Liri database

Issue XIX	19
Issue XXI	1
RPC I, 453, nos. 2733, 2735, or 2737, c. 10 BC–AD 10:	
Head of Augustus / Head of Herakles in a lion's skin	4
RPC I, 453, no. 2739, c. 10 BC–AD 10:	
Head of Augustus / Club and serpent-staff	2

The fact that issues XIX to XXI did not travel to Italy together is difficult to explain, as they circulated together in Kos and as issue XXI was the larger.<sup>127</sup> This, the close chronological link between the two issues and the absence of the countermark in Italy, suggest that these coins arrived early, when issue XXI was only just coming into circulation. This argues strongly for the movement of a block of coins and not a gradual trickle in through trade. It is possible that this block was exported—we cannot suggest how or for what reason—at the time of or just before countermarking for continued circulation, in connection, Stefanaki believes, with Koan silver and bronze plinthophoric issues of between c. 180 BC and the end of the century.<sup>128</sup>

The prototype of the Italian overstrikes gives a *terminus post quem* of 137 BC for the overstriking of the Koan type. The coins of issue XIX found in Italy show little sign of wear and are never countermarked. The overstruck pieces do not seem to be over worn coins. It is also important to evaluate the historical probability of large numbers of Koan coins traveling to Italy during the Second Punic War or early afterward, which seems unlikely. From our evidence, then, we would suggest revisiting the Greek evidence, to see whether it is not prudent to date these series later.

Whatever the date, the presence of Koan coin at Rome and at Minturnae testifies to substantial contacts with Rome and is evidence for the island's role in trade with Italy. Kos was known for three exports: wine (made with added seawater), silk,<sup>129</sup> and perfume. Koan wine, in particular, is amply attested, including in Rome and at Pompeii.<sup>130</sup> The ties between the two regions were obviously close.

127. Ingvaldsen (2002, 61–62, fig. 5), however, points out that issue XIX is far better represented than issue XXI in the single finds from within the *temenos* of the Asklepieion, in comparison to the relationship of these issues in the corpus generally. He attributed this to “the coin circulation within the Asklepieion [being] proportionally reduced compared to the island in general in the latter half of the second century.”

128. We thank Vassiliki Stefanaki for her advice.

129. Sherwin-White (1978, 254–255): “The silk trade, too, must have been especially operative in drawing Romans to Cos, whose importation of the rare and luxurious cloth from Cos is so well attested in the early Imperial period.”

130. Sherwin-White (1978, 237, 252): “The Elder Cato had a recipe for the local production of ‘Coan sea-flavoured wine,’ which was evidently known already in Rome by 160 BC, sufficiently well-liked for local production to seem desirable. Indeed Coan wine was popular enough by the first century BC for manufacturers there to imitate the shape of Coan amphorae; a number of locally produced Italian ‘Coan amphorae’ have been found

This drew numbers of Roman and Italian *negotiatores* to settle in Kos.<sup>131</sup> In 88 BC, Kos gave asylum to these Romans in the Asklepieion, on the occasion of Mithradates' visit, while otherwise receiving him hospitably (Sherwin-White 1978, 138–140). Kos remained in Rome's good graces until the civil war of 49–46 BC, when it aligned itself with the republicans and fought with Pompey's fleet.

## APPENDIX 2

### Foreign Coins from Rome, Minturnae, and Pompeii and the Surroundings

In the following Table 8, we have brought together information on the distribution of foreign mints, in a number of substantial finds, from Rome, Minturnae, and Pompeii. At this stage, it is not possible to associate in any meaningful way this information with information on finds of Roman republican coins.

Rome: At the moment, only one substantial group, from the Tiber, has been exhaustively described.<sup>132</sup> From several recent excavations, small numbers only of coins have been described, which we do not list.<sup>133</sup> There are other sources that

at Pompeii. Varro attests the importation of Coan wine to Italy in the first century BC. . . . In his *Res Rusticae*, writing in 37 BC, Varro referred to Romans' current inclination to rely on a contractor to bring grain from Africa and Sardinia, and the wine they stored in their cellars from Cos and Chios, rather than cultivate these products themselves. It is probable that part of the business of the *negotiatores* on Cos was shipping wine. The involvement of Romans, or Italians, in the Coan wine trade is directly attested by the presence of Latin names, written in Latin, on a number of Coan amphorae handles."

131. Sherwin-White (1978, 253): "We receive a distinct impression of the density in which Romans were settled on Cos from inscriptions of the first century BC. This is particularly striking when comparison is made with Roman settlement on Rhodes. There is, for example, no trace of a Roman community established on Rhodes at the time of the First Mithradatic War, as there was on Cos, and on other Aegean islands."

132. Frey-Kupper (1995, 33–34): "Le monete ritrovate nel Tevere, conservate nel Museo Nazionale Romano di Roma, sono venute alla luce tra il 1877 e il 1890 in occasione dei lavori di sistemazione dell'alveo del fiume e di costruzione degli argini del Lungotevere. L'inventario dei singoli pezzi di questo complesso ebbe inizio nel 1903 quando S.L. Cesano prese a lavorare nel Museo Nazionale Romano. Nel 1923, l'inventario della Cesano contava 11.183 monete antiche. I pezzi inventariati non rappresentano tutto il materiale numismatico originale proveniente dal Tevere, ma comunque una buona parte di esso, cioè i pezzi scelti da S.L. Cesano per la raccolta del Museo Nazionale Romano della quale costituiscono un nucleo. L'inventario delle monete 'greche' fu realizzato nel 1909 e ripreso successivamente nel 1923. Nell'inventario mancavano i riferimenti ai luoghi precisi di rinvenimento di questi pezzi e anche non si trovano indicazioni in merito. In occasione del nostro lavoro si sono potute identificare 122 monete 'greche' che corrispondono all'1,1% ca. dei materiali numismatici inventariati dal Tevere. Può sembrare poco, tuttavia il nostro contributo presenta il più grande complesso mai pubblicato di monete 'greche' rinvenute a Roma."

133. Five Greek coins in Molinari (1995, 112–113, nos. 1–5), including one "Dionysus / panther" (Stannard 1995a, 212–213); see also Travaini (1985, 79, no. 1), with another



have not been used, because they have not yet been described: the *Sottosuolo* material on which Maria R. Alföldi (1991) is working with her collaborators and Reece's (1982, 119) assembly of 108 Greek coins from old excavations in Rome. He apologizes for the poverty of the section on the Greek coins, which he does not describe in any detail.

**Minturnae:** There is substantial information on the Greek and Roman imperial coins recovered in the underwater excavations in the Liri at Minturnae by Br. S. Dominic Ruegg (1995, 61–73, 148–152), republished by Novella Vismara (1988).<sup>134</sup> A further substantial block of coins from the Liri, which we list, was described by Teresa Giove (1998).<sup>135</sup> It should be noted that, in Table 8, under the Liri database, we do not list all the coins in the database, only those of mints listed from the other sources, for comparison.<sup>136</sup>

**Pompeii:** We repeat and slightly refine earlier listings.<sup>137</sup> These include material from the British School at Rome excavations in the House of Amarantus (Stannard 2005b, 121), from the Uffici Scavi at Pompeii (Stannard 2005b, 121–122), and from the votive well at Gragnano (Privati di Stabiae) (Cantilena 1997).

This listing is a blunt instrument. A fuller study would need to take into account the dates of the various issues. Table 8 contains coins from the fourth century BC to the third century AD and, without the time element, the historical value of the information is low. The dating of many Greek bronze issues is, however, uncertain and imprecise. This makes the full photographic publication of site finds (as in Vismara 1998) crucial.<sup>138</sup> In this way, the materials may be reinterpreted as numismatic research progresses.

"Dionysus / panther" and Travaini (1996–1997, 412–413), with one Pseudo-Panormitan coin, given to Panormos. There is also a small number of Greek coins from Ostia, published in Silberstein Trevisani (1989, 123, no. 6), given as Punic like SNG Cop., *North Africa*, nos. 94–96; 123, no. 7, "Dionysus / panther," given as Naples; 124, no. 12, given as Antipolis (?), but may be Kos, like our no. 43; 128, no. 32, uncertain Greek Imperial; 126, nos. 21–22, 128, no. 31, and 129, no. 41 (all Massalia of the post-49 BC dumpy types).

134. This listing replaces and refines the earlier, unillustrated, and partial publication of these coins in Frier and Parker (1970), Metcalf (1974), and Houghtalin (1985).

135. The listings of the coins from Ruegg's excavations that she gives in her table B, on p. 132, are based on Frier and Parker (1970), Metcalf (1974), and Houghtalin (1985) and are therefore superseded by the more complete and accurate listings in Vismara (1998).

136. The listing of coins from the Liri database expands those in Stannard (2005b). This is work in progress, and further coins are still to be identified and the whole material published.

137. Stannard (2005b, 141, fig. 13) is based on the material mentioned in the following sources; he examined and counted most of the coins.

138. For poorly preserved bronze coins, illustrations from casts are infinitely preferable to direct photographs. In our studies, we have sometimes only been able to identify coins once we have made casts.

Table 8. A preliminary listing of substantial groups of foreign coins from Rome, Minturnae, and Pompeii and the area

		Rome		Minturnae		Pompeii and area		
		Tevere	Liri	Liri	Liri	Amarantus	Pompeii	Gragnano
		database (Vismara) <sup>139</sup> (Giove)						
Spain	Untikesken / Emporiai		6	1				
	Kese / Tarraco		5	2 <sup>140</sup>				
	Carmo			1				
	Carteia		1	1				
	Ebusus		48	5		13	47	52
	Ebusus and Pseudo-Ebusus				6			
	Carthaginians	1						
Gaul	Massalia and Pseudo-Massalia		106	2	2	4	12	few
	The Turones		1	1				
	The Leuci			1				
	The Eburones			1				
	Narbo		1	1				
	Nemausus		1	3				
Campania	Allifae							1
	Atella or Calatia							1
	Cales		20		3			1
	Compulteria		3					
	Irnthii (Sorrento, sanctuary of Punta della Campanella?)		1		1	1	2	8
	Minturnae (?), Pseudo-Paestum	1	2	1 <sup>141</sup>				
	Minturnae (?), Pseudo-Panormos	4	68	3 <sup>142</sup>		1		
	Neapolis		182	7	8	9	10	300+
	Nuceria Alfaterna		1			2		15
	Phistelia					1		1
	Pompeii, Pseudo-Ebusus		61	1		12	22	5
	Pompeii, Pseudo-Massalia	At least 3 AOY					1	?
	Suessa		6		1			

139. In this column, we give, in a footnote, the reference in Vismara (1998) of those coins we attribute differently. We have not checked all the attributions, which is difficult from photographs of poor coins. Vismara herself notes that some of her attributions are hypothetical. We have also excluded those coins that she lists as illegible and a few very uncertain pieces: nos. 99–104 and 146.

140. No. 8 (as Kese) and no. 122 (as Tarraco).

141. No. 40, the same dies as no. 16 of this paper.

142. Nos. 52–55.

		Rome		Minturnae		Pompeii and area		
		Tevere	Liri	Liri	Liri	Amarantus	Pompeii	Gragnano
		database	(Vismara)	(Giove)				
Latium, Samnium, Campania	Shared types (Athena / cock)			2				
	Shared types (Apollo / Bull)			3	13			
Central Italia assemblage <sup>143</sup>	Bearded Hercules, club on shoulder / young Hercules, wearing lion's skin, in wreath	2		1 <sup>144</sup>				
	Dionysus / panther <sup>145</sup>	245		6 <sup>146</sup>	4		1	
	Geryon / Hercules fighting Hydra	10		2 <sup>147</sup>				
	Janus / Vulcan, L.NNI	4		1 <sup>148</sup>				
	Vulcan / ring, holding strigils and aryballos; P.CAIO	31		1 <sup>149</sup>				
	Vulcan / cornucopiae; P.CAIO	14		1 <sup>150</sup>				
	Helmeted Athena / centaur; SCÆVA / MF or MF;	12		1 <sup>151</sup>				
	Elephant / standing male figure			1 <sup>152</sup>				

143. The “central Italian assemblage” is a term that Stannard uses for a large and mostly unpublished group of coins on which he is working. It is mainly bronze, but it includes struck lead issues, sometimes from the same dies as the bronze; there are divisional pieces with uncial values and coordinated denominations. All legends are Latin, often the names of members of the *Annia gens*, using the ligate letters, *N*, alone, and in a variety of expanded forms. Overstrikes—including on post-*Lex Papiria* Roman bronze—give dates in the early part of the first century BC. The coins were probably struck in southern Latium and northern Campania. For an overview, see Stannard (2005a, 48).

144. No. 64 (as Panormus) = Bahrfeldt (1904, 438, no. 92, and pl. V, no. 107). The issue is not Sicilian.

145. This is the commonest of the issues in the central Italian assemblage and is discussed in Stannard (1995a, 212–213, and pl. 31, 15–19, and pl. 32, 45). He dates it, by overstrikes discussed there, to the late 90s and early 80s BC. Morello (1996) publishes 221 specimens of this issue, all taken without reference from the photographs in Stannard (1995b), which represented the status of the Liri database of the central Italian assemblage at that time.

146. Nos. 16–21 (as Minturnae).

147. Nos. 23–24 (as uncertain of central Italy).

148. No. 27 (as uncertain of central Italy, or Sicily). For this issue, see Stannard (2005a, 55, no. 20). This is an example of a legend of a member of the *Annia gens*, which is common in the central Italian assemblage.

149. No. 25 (as uncertain of central Italy). For this issue, see Stannard (2005a, 53, no. 10). The strigils and aryballos is one of the Italo-Baetic types that characterize much of the central Italian assemblage; *ibid.*, 47–61.

150. No. 26 (as uncertain of central Italy).

151. No. 15 (as Larinum): listed by Babelon as Aufidia 4.

152. No. 22 (as uncertain of central Italy).

		Rome		Minturnae		Pompeii and area		
		Tevere	Liri	Liri	Liri	Amarantus Pompeii	Gragnano	
		database	(Vismara)	(Giove)				
Apulia	Arpi		4		4			1
Calabria	Brundision		3	1				1
	Orra				1			
	Taras		2					1
Lucania	Copia		1	1				
	Heraklea		1					
	Paestum	7	21	2	1	1		6+
	Velia		29	1	1	1		1
Bruttium	Locri Epizephyrri		4		1			
	Rhegion	5	35	1	3			
Sicily	Akragas	7	3	1				
	Alaisa	1	5		1			
	Kamarina		1					
	Katane	1	7					
	Kentoripai		2	1				
	Lilybaion (?)			3 <sup>153</sup>				
	Messana, Mamertines		14	3	5		1	3
	Morgantina, Hispanorum		1		1			
	Panormos	6	28	3		1		1
	Uncertain western Sicilian mint		1	2 <sup>154</sup>				
	Syracuse	32	61	5 <sup>155</sup>	6	2	1	9
	Tauromenion	3 <sup>156</sup>	6					
	Carthaginians	3	5		3 <sup>157</sup>			1
Sardinia	Carthaginians	7	9	4	1		2	
Macedonia	Kingdom		4	3				
	Philippi			1				

153. Nos 61 (Janus / *M. ACILI Q* in wreath), 62 (Janus / *NASO* in wreath), 63 (Janus / wolf and twins, P.E) (as uncertain of Sicily). Frey-Kupper (1999, 411–413), attributed these coins to Lilybaion (?), and we list them here as such.

154. Nos. 65 and 66 (as uncertain of Sicily). These are of a Romano-Sicilian series (Gàbrici 1927, 160, nos. 261–267); see Frey-Kupper (forthcoming, part 1, chap. 4.5, nos. 684–689).

155. No. 56 is very small and light (18 mm, 2.9 g). It may be an imitation (like Buttrey, Erim, Groves, and Holloway 1989, 102, no. 343) or a coin of the Mamertines (like Särström 1940, group V C).

156. Tusa Cutroni (2003, 361) proposes to attribute the two specimens of the type "woman's head with *polos*, left / bunch of grapes," Frey-Kupper (1999, 60, nos. 67–68) to Sardinian mercenaries in Sicily.

157. From the description, one possibly Carthage.

		Rome		Minturnae	Pompeii and area		
		Tevere	Liri	Liri	Liri	Amarantus	Pompeii Gragnano
		database	(Vismara)	(Giove)			
Thrace	Sestos		5	1		1	
	Odessos		1				
Thessaly	General		3	1		1	
Illyria	Apollonia	1	12	1			
	Kings of, Ballaios		11			1	
	Epidamnos-Dyrrhachion	1	9				1
Islands off	Korkyra			1			
Illyria	Leukas			1			
Acarnania	Thebes	3	10				
Boeotia	Thespiiai		5	2			
	Elis		7	1			
Peloponessos	Elis Zakynthos	1			1		
Aitolia	Aitolian League						1
Euboea	Chalkis	1					
Attica	Athens	1	7				
Achaia	Aigion				1		
	Patras		1	1			
Messenia	Messene	1					
Argolis	Argos	2	15		1		3
Arcadia	Mantineia					1	
Cyclades	Paros						
Pontos	Amisos	1	3				
Paphlagonia	Amastris	1					
Bithynia	Kingdom, Prusias II		10	1 <sup>158</sup>			
	Prusias ad Hypium (?)			1			
Mysia	Kyzikos		1	1			
	Pergamon		2	1			
Ionia	Klazomenai	1					
	Ephesos		5	1		1	
	Magnesia		2	1			
	Miletos	2	20	3			
	Smyrna			1			
Islands off	Samos	5	5				
Ionia							

158. No. 46 (as Sicily, Aitna).

		Rome		Minturnae	Pompeii and area			
		Tevere	Liri	Liri	Liri	Amarantus	Pompeii	Gragnano
		database		(Vismara)	(Giove)			
Islands off	Teos		2	1				
	Kos	13	26	1				
Karia	Apameia		2			1		
	Eukarpeia			1				
Lycia	Masikytes		1			1		
Pisidia	Termessos			1				
Cappadocia	Caesarea			2				
Syria	Antioch		2	5				
	Laodikeia ad Mare			1				
	Seleukeia Pieria			1				
	Chalkis			1				
Phoenecia	Karne			1				
Palestine	Herod Agrippa I			1				
Judaea	Procurators		10	3				
	Aelia Capitolia			1				
Nabataea	Aretas IV			1				
Mesopotamia	Carrhae			1				
	Raphaena			1				
	Edessa			1				
Egypt	Alexandria		13	1	1	1		
Islands								
between	Melita							
Africa and								
Sicily			10	1				
Kyrenaika	General	1	138+	5	4	2	2	
Zeugitania	Carthage	23	19	2		1		Some
	Utica	1						
	Total	137	1438+	134	74	59	102	412+

## ABBREVIATIONS

- BAR = British Archaeological Reports.  
 CMRR = Crawford, Michael H. 1985. *Coinage and money under the Roman republic*. London.  
 HN, Italy = Rutter, N. Keith, ed. 2001. *Historia Nummorum. Italy*. London.  
 OGIS = Dittenberger, Wilhelm, ed. 1903–1905. *Orientis Graeci inscriptiones selectae. Supplementum Sylloges inscriptionum Graecarum*. Leipzig.  
 RPC I = Amandry, Michel, Andrew Burnett, and Pere Pau Ripollès. 1992. *Roman provincial coinage*. Vol. 1, *From the death of Ceasar to the death of Vitellius (44 BC–AD 69)*. London and Paris.  
 RRC = Crawford, Michael H. 1974. *Roman republican coinage*. Cambridge.  
 SNG Cop., Italy–Sicily = *Sylloge Nummorum Graecorum. The Royal collection of coins and medals. Danish National Museum*. Vol. 1, *Italy–Sicily*. Copenhagen, 1942.  
 SNG Cop., Ionia, Caria and, Lydia = *Sylloge Nummorum Graecorum. The Royal collection of coins and medals. Danish National Museum*. Vol. 5, *Ionia, Caria, and Lydia*. Copenhagen, 1947.  
 SNG Cop., North Africa = *Sylloge Nummorum Graecorum. The Royal collection of coins and medals. Danish National Museum*. Vol. 42, *North Africa, Syrtica–Mauretania*. Copenhagen, 1969.

## REFERENCES

- Bahrfeldt, Max von. 1904. Die römisch-sicilischen Münzen aus der Zeit der Republik. *Schweizerische Numismatische Rundschau* 12: 331–445.  
 Balbi de Caro, Silvana, et al. 1991. *Geld aus dem antiken Rom. 'Assem habeas, assem valeas—Hast du was, bist du was'*. Ausstellung im Dormitorium des Karmeliterklosters, Frankfurt am Main, vom 17.1. bis 10.3.1991. Frankfurt am Main.  
 Barrandon, Jean-Noël, and Olivier Picard. 2007. *Monnaies de bronze de Marseille. Analyse, classement, politique monétaire*. Cahiers Ernest-Babelon 10. Paris.  
 Bechtold, Babette. 1999. *La necropoli di Lilybaeum*. Palermo.  
 Bellini, Giovanna Rita, ed. 1996–2000. *Minturnae Antiquarium: monete dal Garigliano*. Vol. 1, *Guida alla mostra, catalogo delle monete esposte* (texts by Giovanna Rita Bellini, Fiorenzo Catalli, Teresa Giove, Rodolfo Martini, Massimiliano Munzi, Novella Vismara) (1996); Vol. 2, *Monete greche, provinciali romane e tessere romane (di bronzo e di piombo)* (texts by Stefano Medas, Mechtild Overbeck, Novella Vismara) (1998); Vol. 3, *La città ed il porto (296–44 a.C.), monete romane repubblicane (fino alla morte di Cesare)* (texts by Giovanna Rita Bellini, Fiorenzo Catalli) (1998); Vol. 4, *Monete romane (Caesar–Nero), fonti epigrafiche e letterarie* (texts by Rodolfo Martini,

- Francesca Pompilio) (1998); Vol. 5, *Minturnae: trasformazioni e società tra la tarda Repubblica e gli Antonini. Committenza degli edifici pubblici di Minturnae tra la tarda età repubblicana e il periodo antonino. Monete dal Garigliano (68–98 d.C.), l'Interregno, la dinastia Flavia e il regno di Nerva* (texts by Giovanna Rita Bellini, Giuseppe Mesoletta, Fiorenzo Catalli) (2000); Vol. 6, *Monete imperiali romane: Traiano-Commodo (98–192 d.C.)* (text by Fiorenzo Catalli) (2000). Rome and Milan.
- Benedetti, Maria Gilda, Fiorello Catalli, and Maria De Lucia Brolli. 1999. Rinvenimenti monetali nel territorio dell'antica Narce: il santuario suburbano in località Monte Li Santi-Le Rote. *Catalogo. Bollettino di Numismatica* 32–33: 47–102.
- Brenot, Claude. 1990. Le monnayage de Marseille du III<sup>e</sup> s. à 49 av. J.-C. In *Gaule interne et Gaule méditerranéenne aux II<sup>e</sup> et I<sup>er</sup> siècles av. J.-C.: confrontations chronologiques, actes de la table ronde de Valbonne (11–13 novembre 1986)*, Alain Duval, Jean-Paul Morel and Yves Roman, eds., 27–35. *Revue archéologique de Narbonnaise, Supplément* 21. Paris.
- Burnett, Andrew. 1982. The currency of Italy from the Hannibalic war to the reign of Augustus. *Annali dell'Istituto Italiano di Numismatica* 29: 125–137.
- Buttrey, Theodore. 1980. Cosa: The Coins. *Memoirs of the British Academy in Rome* 34: 11–154.
- , Kenan T. Erim, Thomas D. Groves, and R. Ross Holloway. 1989. *Morgan-tina Studies*. Vol. 2, *The Coins*. Princeton, N.J.
- Campo, Marta. 1976. *Las monedas de Ebusus*. Barcelona.
- . 1993. Las monedas de Ebusus. In *VII Jornada de arqueología fenico-púnica*, 147–171. *Trabajos del Museo Arqueológico de Ibiza* 31. Ibiza.
- . 1994. Les Monedes de l'Eivissa Púnica. In *La Moneda a l'Eivissa Púnica*. Palma de Majorca.
- Cantilena, Renata. 1997. Le Monete. In *Gagnano: Il santuario campano in località Privati presso Castellammare di Stabia. Osservazioni preliminari*, by Paola Miniero et al., 39–50. *Rivista di Studi Pompeiani* 8: 11–56.
- , Marcella Pellegrino, and Monica Satriano. 1999. Monete da Poseidonia-Paestum: trasformazioni e continuità tra Greci, Lucani e Romani. *Annali dell'Istituto Italiano di Numismatica* 46: 9–154.
- Catalli, Fiorenzo. 1971–1972. Soprintendenza alle Antichità delle Provincie di Salerno, Avellino e Benevento. *Annali dell'Istituto Italiano di Numismatica* 18–19: 315.
- Costa Ribas, Benjamí. 2007. Punic Ibiza under the Roman republic. In *Articulating local cultures: Power and identity under the Roman republic*, Peter van Dommelen and Nicola Terrenato, eds., 85–101. *Journal of Roman Archaeology, Supplementary Series* 63. Portsmouth, N.H.



- Crawford, Michael H. 1973. Paestum and Rome: The form and function of a subsidiary coinage. In *La Monetazione di bronzo di Poseidonia-Paestum. Atti del III Convegno del Centro Internazionale di Studi Numismatici, Naples, 19-23 April 1971*, 47-109. *Annali dell'Istituto Italiano di Numismatica*, Supplemento al Volume 18-19. Rome.
- . 1976-1977. The imperial bronze coinage of Paestum. *Annali dell'Istituto Italiano di Numismatica* 23-24: 151-159.
- . 1982. Unofficial imitations and small change under the Roman republic. *Annali dell'Istituto Italiano di Numismatica* 29: 139-164.
- Daehn, Hans-Steffen. 1991. *Die Gebäude an der Westseite der Agora von Iaitas*. *Studia Ietina* 3. Zürich.
- Depeyrot, Georges. 1999. *Les monnaies hellénistiques de Marseille*. Collection Moneta 16. Wetteren.
- Di Iorio, Antonino. 1997. *L'apporto della civiltà magnogreca in area sannitica*. Rome.
- Figueira, Thomas John. 1998. *The power of money: Coinage and politics in the Athenian empire*. Philadelphia.
- Finkielsztejn, Gérald. 2001. *Chronologie détaillée et révisée des éponymes amphoriques rhodiens de 270 à 108 av. J.-C. environ. Premier bilan*. BAR International Series 990. Oxford.
- Frier, Bruce W., and Anthony Parker. 1970. Roman coins from the River Liri. *Numismatic Chronicle* 7, no. 10: 89-109.
- Frey-Kupper, Suzanne. 1992a. La circolazione monetaria a Monte Iato dall'inizio della dominazione romana fino all'età tiberiana. In *Giornate internazionali di studi sull'area elima (Gibellina, 19-22 Settembre 1991)*, 281-297. Pisa and Gibellina.
- . 1992b. Zur frühen Münzprägung Siziliens unter römischer Herrschaft: der Hort von Campobello di Licata. *Schweizerische Numismatische Rundschau* 71: 149-178.
- . 1995. Monete dal Tevere—I rinvenimenti 'greco'. *Bollettino di Numismatica* 25: 33-73.
- . 1999. I ritrovamenti monetali. In *La necropoli di Lilybaeum*, by Babette Bechtold, 395-457. Palermo.
- . Forthcoming. *Die Fundmünzen vom Monte Iato 1971-1990. Ein Beitrag zur Geldgeschichte Westsiziliens*. *Studia Ietina* 10.
- Gàbrici, Ettore. 1927. *La monetazione del bronzo nella Sicilia antica*. Palermo.
- Gandolfo, Lucina. 1995. Le monete (1989-1992). *Annali della Scuola Normale Superiore di Pisa* 3, no. 25: 1204-1260.
- Gentric, Gisèle. 1987. Essai de typologie des petits bronzes massaliètes au taureau cornupète. In *Mélanges offerts au Docteur J.-B. Colbert de Beaulieu*, 389-400. Paris.

- Giannikouri and Stefanaki. (Forthcoming in *Οβολός* 9.) = Αγγελική Γιαννκουρή και Βασιλική Ε. Στεφανάκη. Forthcoming. «Θησαυρός» χάλκινων νομισμάτων ελληνιστικής περιόδου από την Κω. Νομισματικό σύστημα και υποδιαίρεσεις των χάλκινων κωακών νομισμάτων. Paper presented at the Fifth Numismatic Scientific Meeting, held in Mytilini (Lesbos) in 2006.
- Giannikouri and Stefanaki 2006 = Αγγελική Γιαννκουρή και Βασιλική Ε. Στεφανάκη, Νομίσματα. Νομισματική Δωδεκανήσου: Η περίπτωση της Κω. Πρώτη παρουσίαση του προγράμματος. *Το νόμισμα στα Δωδεκάνησα και τη Μικρασιατική τους Περαία*, 105–124. *Οβολός* 8. Athens.
- Giove, Teresa. 1998. Soprintendenza Archeologica di Napoli e Caserta: monete dal fiume Garigliano. *Annali dell'Istituto Italiano di Numismatica* 45: 129–286.
- Grace, Virginia R. 1985. The middle stoa dated by amphora stamps. *Hesperia* 54: 1–45, pl. 1–5.
- Greco Pontrandolfo, Angela. 1971–1972. Ripostiglio monetale da Velia. *Annali dell'Istituto Italiano di Numismatica* 18–19: 91–111.
- Grella, Consalvo. 1980–1981. Museo Provinciale Iripino. *Annali dell'Istituto Italiano di Numismatica* 27–28: 223–236.
- . 1983. Museo Provinciale Iripino. *Annali del Museo Provinciale Iripino* 30: 159–180.
- Hernandez, Alain-Christian. 2005. Pompéi extra muros. La première campagne de fouilles. In *Nuove ricerche a Pompei ed Ercolano, Atti del Convegno Internazionale, Roma 28–30 Novembre 2002*, Pietro Giovanni Guzzo and Maria Paola Guidobaldi, eds., 371–378. Studi della Soprintendenza Archeologica di Pompei 10. Pompei.
- Hobbs, Richard. 2003. Coins from the AAPP excavations, Pompeii. *Numismatic Chronicle* 163: 377–379.
- . 2005. Coins from the AAPP excavations, Pompeii: update 1. *Numismatic Chronicle* 165: 377–381.
- Höghammar, Kerstin. 2007. A group of Koan issues from c. 200 BC. *Numismatic Chronicle* 167: 79–92.
- Hollander, David B. 2007. *Money in the late Roman republic*. Columbia Studies in the Classical Tradition 29. Leiden.
- Houghtalin, Liane. 1985. Roman coins from the River Liri, III. *Numismatic Chronicle* 145: 67–81.
- Howgego, Christopher. 1995. *Ancient history from coins*. London and New York.
- Ibáñez, Miguel, and José Blanco. 1995. Un ensemble de petits bronzes massaliotes en Celtiberie. *Bulletin de la Société Française de Numismatique* (January): 979–984.
- Ingvaldsen, Håkon. 2002. *Cos—Coinage and society: The chronology and function of a city-state coinage in the classical and Hellenistic Period, c. 390–170 BC*. Acta Humaniora 149. Oslo.

- Krauss, Johannes, ed. 1980. *Die Inschriften von Sestos und der thrakischen Chersones*. Bonn.
- Kroll, John H. 1993. *The Athenian agora*. Vol. 26, *The Greek coins*. Princeton, N.J.
- Lawall, Mark L. 2002. Early excavations at Pergamon and the chronology of Rhodian amphora stamps. *Hesperia* 71: 295–324.
- Libero Mangieri, Giuseppe. 1990a. Monete rinvenute negli scavi di Velia: l'acropoli. *Rivista Italiana di Numismatica* 92: 19–32.
- . 1990b. Soprintendenza Archeologica delle Province di Salerno, Avellino e Benevento. *Annali dell'Istituto Italiano di Numismatica* 37: 203–237.
- . 1993. Velia: problemi di circolazione monetaria. *Rassegna Storica Salernitana*, annata 10, no. 2, fascicolo 20 (December): 9–42.
- Lucchelli, Tomaso, and Giovanni Di Stefano. 2004. *Monete dall'agorà di Camarina. Campagne di scavo 1983–1995*. Milan.
- Maiuri, Amadeo. 1950. Pompei—Scoperta di un edificio termale nella Regio VIII, Insula 5, nr. 36. *Notizie degli Scavi di Antichità* 11: 116–136.
- Mammina, Giuseppina. 1995. Le monete 1993. *Annali della Scuola Normale Superiore di Pisa* 3 (25): 1260–1295.
- . 1997. La documentazione numismatica. In *Il castello e la moschea (scavi 1989–1995)*, by Alessandra Molinari, 189–204. Segesta 2. Palermo.
- Meadows, Andrew. 2001. Money, freedom, and empire in the Hellenistic world. In *Money and its uses in the ancient Greek world*, by Andrew Meadows and Kirsty Shipton, 53–63. Oxford.
- Mello, Mario, and Giuseppe Voza. 1968. *Le iscrizioni latine di Paestum*. Naples.
- Metcalf, William E. 1974. Roman coins from the River Liri, II. *Numismatic Chronicle* 7 (14): 42–52.
- Martini, Rodolfo. 1988. *Monetazione bronzea romana tardo-repubblicana I*. Milan.
- Molinari, Maria Cristina. 1995. Le monete della Meta Sudans (Roma). *Annali dell'Istituto Italiano di Numismatica* 42: 109–161.
- Morello, Antonio. 1996. Le monete di Baccho a Minturnae. Il culto di Baccho, i riti. Il culto dei Bacchanali. *Quaderno di studio di Circolo Filatelico Numismatico 'Mario Rasile,' Formia* 13 (January–February).
- Nassa, Mario. 1999. Ritrovamenti monetari del Medio Volturno e delle zone campane limitrofe nel quadro dei più noti ripostigli scoperti in area Sannitica. *Annuario dell'Associazione Storica del Medio Volturno*, 209–250.
- Peter, Markus. 2004. Imitation und Fälschung in römischer Zeit. In *Faux-contrefaçons-imitations, Actes du quatrième colloque international du Groupe suisse pour l'étude des trouvailles monétaires (Martigny, 3–4 mars 2002)*. *Fälschungen–Nachahmungen–Imitationen. Sitzungsbericht des vierten internationalen Kolloquiums der Schweizerischen Arbeitsgemeinschaft für Fundmünzen (Martigny,*

- 3.-4. März 2002), by Anne-Francine Auberson Fasel, Harald R. Derschka, and Suzanne Frey-Kupper, 19-30. *Études de numismatique et d'histoire monétaire 5 / Untersuchungen zu Numismatik und Geldgeschichte 5*. Lausanne.
- Py, Michel. 2006. *Les monnaies préaugustéennes de Lattes et la circulation monétaire protohistorique en Gaule méridionale*. Lattara 19. Lattes.
- R. Alföldi, Maria. 1991. Griechische Münzen in Rom. In *Geld aus dem antiken Rom*. 'Assem habeas, assem valeas—Hast du was, bist du was'. Ausstellung im Dormitorium des Karmeliterklosters, Frankfurt am Main, vom 17.1. bis 10.3.1991, by Silvana Balbi de Caro et al., 33-35. Frankfurt am Main.
- Ranucci, Samuele. 2008. Moneta straniera a Pompei in età repubblicana: nuove acquisizioni. In *Iberia e Italia: modelos romanos de integración territorial. IV Congreso hispano-italiano, Murcia, 26-29 abril 2006*, José Miguel Noguera Celadrán and Filippo Coarelli, eds., 249-260. Murcia.
- Reece, Richard. 1982. A collection of coins from the centre of Rome. *Papers of the British School at Rome* 50: 116-145.
- Robert, Louis. 1973. Les monétaires et un décret hellénistique de Sestos. *Revue Numismatique* 6 (15): 45-52.
- Rotroff, Susan I. 2006. *The Athenian agora*. Vol. 33. *Hellenistic pottery. The plain wares*. Princeton, N. J.
- Ruegg, S. Dominic. 1995. *Underwater investigations at Roman Minturnae, Liris-Garigliano River*. Patrol, Sweden.
- Sallusto, Federico. 1971. *Le Monete di Bronzo di Poseidonia-Paestum nella collezione Sallusto*. Naples.
- Särström, Margit. 1940. *A study in the coinage of the Mamertines*. Lund.
- Sherwin-White, Susan M. 1978. *Ancient Cos*. Göttingen.
- Silberstein Trevisani, Susanna. 1989. Le monete rinvenute ad Ostia nella taberna presso il muro del castrum (Regio I, Insula X, 3). In *La moneta nei contesti archeologici. Esempi dagli scavi di Roma. Atti dell'incontro di studio, Roma 1986*, 121-137. Studi e materiali 2. Rome.
- Stannard, Clive. 1987. Two-headed and two-tailed denarii in the Roman republic. *Numismatic Chronicle* 147: 160-163.
- . 1995a. Iconographic parallels between the local coinages of central Italy and Baetica in the first century BC. *Acta Numismatica* 25 (July): 47-97.
- . 1995b. *The local coinages of central Italy in the late Roman republic: provisional catalogue, June 1995*. Rome.
- . 1998. Overstrikes and imitative coinages in central Italy in the late republic. In *Coins of Macedonia and Rome: Essays in honour of Charles Hersh*, Andrew Burnett, Ute Wartenberg, and Richard B. Witschonke, eds., 209-229. London.

- . 2005a. Numismatic evidence for relations between Spain and central Italy at the turn of the first and second centuries BC. *Schweizerische Numismatische Rundschau* 84: 47–79.
- . 2005b. The monetary stock at Pompeii at the turn of the second and first centuries BC: Pseudo-Ebusus and pseudo-Massalia. In *Nuove ricerche a Pompei ed Ercolano, Atti del Convegno Internazionale, Roma 28–30 Novembre 2002*, Pietro Giovanni Guzzo and Maria Paola Guidobaldi, eds., 120–143. Studi della Soprintendenza Archeologica di Pompei 10. Pompei.
- Stazio, Attilio. 1955. Rapporti fra Pompei ed Ebusus nelle Baleari alla luce dei rinvenimenti monetali. *Annali dell'Istituto Italiano di Numismatica* 2: 33–57.
- Travaini, Lucia. 1985. Sito B: Monete dallo Scavo di Lungotevere Testaccio (anni 1979–1983). *Bollettino di Numismatica* 5: 71–126.
- . 1991. More evidence on the finds of coins of Ebusus in Italy. *Revue Belge de Numismatique et de Sigillographie* 137: 193–197.
- . 1996–1997. Roma—Saggio di scavo nell'aula di "San Isidoro in Thermis": monete. *Notizie degli Scavi di Antichità*, serie 9, vol. 7–8: 412–413.
- Tusa Cutroni, Aldina. 1955. Vita dei medaglieri. Soprintendenza alle antichità per le province di Palermo e di Trapani. *Annali dell'Istituto Italiano di Numismatica* 2: 192–195.
- . 1956. Vita dei medaglieri. Soprintendenza alle antichità per le province di Palermo e di Trapani. *Annali dell'Istituto Italiano di Numismatica* 3: 221–224.
- . 1958–1959. Vita dei medaglieri. Soprintendenza alle antichità per le province di Palermo e di Trapani. *Annali dell'Istituto Italiano di Numismatica* 5–6: 306–318.
- . 1961. Osservazioni sulla circolazione monetale a Selinunte nel IV–III sec. a.C. *Kokalos* 7: 113–121.
- . 2003. Mercenari sardi in Sicilia? In *Quarte giornate internazionali di studi sull'area elima (Erice), 1–4 Dicembre 2000. Atti*, 355–365. Pisa.
- Vismara, Novella. 1998. Monete Greche e Provinciali Romani dal Garigliano. In *Minturnae Antiquarium: Monete dal Garigliano, II: Monete Greche, Provinciali Romane e tessere Romane (di bronzo e di piombo)*, Giovanna Rita Bellini, ed., 9–104. Rome and Milan.
- Wigg-Wolf, David. 2004. Zur Interpretation und Bedeutung der "Barbarisierungen" der römischen Kaiserzeit. In *Faux-contrefaçons-imitations, Actes du quatrième colloque international du Groupe suisse pour l'étude des trouvailles monétaires (Martigny, 3–4 mars 2002). Fälschungen-Nachahmungen-Imitationen. Sitzungsbericht des vierten internationalen Kolloquiums der Schweizerischen Arbeitsgemeinschaft für Fundmünzen (Martigny, 3.–4. März 2002)*, by Anne-Francine Auberson Fasel, Harald R. Derschka, and Suzanne Frey-Kupper, 55–75. *Études de numismatique et d'histoire monétaire* 5 / *Untersuchungen zu Numismatik und Geldgeschichte* 5. Lausanne.

## Local Politics in the Late Republic: Antony and Cleopatra at Patras

EMILY HAUG\*

Two Late Roman Republican coins from Patras are investigated: one with a portrait of Cleopatra (*RPC* 1.1245) and the second signed by Agys Aischriou-*nos* (*BMC Patras* 1–2). A close examination of the former reveals previously unpublished information about its legend and imagery, with special attention paid to Patras's attraction to Alexandria. An examination of the second coin illustrates how the city subsequently demonstrated its loyalty to Rome.

Taking as its focus Greece in the late Roman Republican period, with emphasis on the city of Patras, this paper asks *how* we can relate historical circumstances to *why* coins were struck, with *what* iconography a city decided to strike coinage, and thereby how we should interpret these issues.<sup>1</sup> In particular, it studies the numismatic evidence for the political power of Antony, and eventually Cleopatra, in a city of Greece in the late 30s BC. By examining a particular city of the eastern Roman Empire where Antony had established important political and social networks after the formation of the Triumvirate, we can better appreciate how local politics reacted to larger events in the Mediterranean. As we will see, between

\*emmy.haug@gmail.com

1. I would like to thank all of the staff at the American Numismatic Society, where I worked on this paper as a participant in the Graduate Summer Seminar in 2006. In particular, I would like to express gratitude to Rick Witschonke and Peter van Alfen for all of their help and advice, as well as my advisor for the project, Andrew Meadows, whose guidance and discussions were indispensable. I would also like to thank the San Francisco Ancient Numismatic Society for hearing and commenting on an early draft of this paper, as well as Carlos Noreña and the reviewers for offering useful suggestions and criticism.

the death of Caesar and the Battle of Actium, Patras gives indications that it had turned its loyalties to Cleopatra rather than to Rome; that is, Cleopatra's patronage was seen as a viable, if not preferable, alternative to Roman rule by influential parties in the Greek city. We can track how Patras situated itself in the larger circumstances of the region during the Triumviral period, Antony's buildup for war, and the immediate aftermath of his defeat. Indeed, Patras reveals itself as just one city among many that adapted quickly to the changing tides of authority that convulsed the Mediterranean before the *pax Augusta* became established.

Located in the northern Peloponnese, Patras has a history of coin production that has not, as yet, undergone a thorough and systematic examination.<sup>2</sup> This city's coinage deserves attention for more than one reason. First, the consistency with which it issued coinage allows for a *longue durée* approach. Second, Patras became a colony during the reign of Augustus, a fact that offers opportunities for research into Roman imperialism and provincial administration via numismatic imagery; indeed, during the Flavian period Patras offers one of the few cases where we know of imperial intervention in local coin production (Levy 1987). Third, its proximity to Corinth, also a Roman colony, allows for interesting avenues of comparison and contrast. Finally, the coinage of Patras reveals a choice of types that does not restrict itself to the formula of many other colonies; that is, while it maintained the standard colonial types of the colonist or priest ploughing, the *aquila* and standards, and the she-wolf suckling Romulus and Remus, it embraced other types of singularly Hellenistic character, making possible an examination of the construction and expression of collective identity. Although study of Patras's coinage is thus open on many fronts, for our purposes we will concentrate on two of its coin issues: the famous coin with Cleopatra's portrait issued in 32–31 BC (Fig. 1) and that signed by Agys Aischrionos (Fig. 2).

In order to understand these coins, we must briefly consider the wider political stage of 32–31 BC. As a major player on this stage, Cleopatra became legendary from the moment of her death—if not beforehand—and her image remains multifaceted (Jones 2006; Walker and Higgs 2001; Wyke 2002). A sometimes romanticized and scandalous picture of Cleopatra survives from the ancient literary evidence, undoubtedly written by authors with agendas or men separated from her by a significant amount of time. As the object of scorn and even praise, ancient historians made her famous as a tirelessly charming temptress who was able to bewitch Marc Antony, an example of a vulnerable man who succumbed to foreign, female allure (Pelling 1988, 17–18; Seneca *Ep.* 83.25; cf. Josephus *A.J.* 15.93, Dio 48.24.2, App. 5.8–9, Horace *Epode* 9).

2. For a very brief study of the imagery on Greek colonial coinage, including Patras, see Papageorgiadou-Bani (2004).



Figure 1 (at 1.5x1 scale)

Image courtesy of LHS Numismatik AG, *Coins of the Peloponnesos—The BCD Collection*, Auction 96, Lot no. 531



Figure 2 (at 2x1 scale)

Image courtesy of LHS Numismatik AG, *Coins of the Peloponnesos—The BCD Collection*, Auction 96, Lot no. 535

Yet according to the poets, she posed a threat not only to one Roman's virility: they painted a picture of a foreign, frenzied queen who plotted against Rome itself with dangerous dreams of grandeur (Propertius *El.* 3.11). Although the surviving ancient sources are hostile (even if sometimes ambiguous) toward Antony and Cleopatra, it would be inadvisable simply to assume that Antony and Cleopatra's defeat was inevitable. In 31 BC, Antony still had many attributes to make him attractive to his supporters; indeed, his attempts to conquer the East put him in the footsteps of Alexander the Great, Pompey, and Julius Caesar (Williams 2001, 195–196). It is entirely plausible that up to the Battle of Actium, Antony had real support not only in the East but even at Rome, and Octavian had an uphill ideological battle to fight against his former brother-in-law, which he conducted vigorously in 32 BC and thereafter. The inclusion of Cleopatra in Antony's plans, however, had the potential to divert provincial attention away from Rome, and it is tempting to explore whether the victor of Actium had to reestablish "the centrality of Rome within world affairs, as the seat of eternal Victory whose headquarters were on the purely purified Capitol" and subdue any ideas of rising power in the East (Williams 2001, 197). It is possible, as we will suggest was the case with Patras, that



for eastern Mediterranean regions Alexandria became a viable alternative political center to Rome through the partnership of Cleopatra and Antony.

By 32–31 BC, Patras had a long history of involvement with Rome. Although it had been involved in the Achaean War against the Romans, which resulted in the destruction of Corinth in 146 BC by Lucius Mummius, Patras's harbor nonetheless profited from the destruction of its neighbor, which led to increasing ties to the West, and especially to Rome (Rizakis 2001, 75; 1988, 454; 1989, 180; Warren 1999, 378, 388n59). By the late Republic, Patras was important as a point of landing and embarkation for Sulla during Rome's war against Mithridates, and in the 50s BC Cicero's letters reveal that the city's port was a popular destination for important Roman politicians, including Caesar (*ad Att.* 11.20, 11.21, 16.6; *ad Fam.* 16.6, 7.28). In 40 BC, Antony was accorded Greece as a part of the Treaty of Brundisium, and his sojourn in Patras in the winter of 32 BC with Cleopatra, as related by Dio Cassius (50.9.3), is the most likely date for the minting of the first issue under consideration (Fig. 1).

This coin was among the last fractional bronze coins minted by the Greek city. The obverse has a diademed portrait of Cleopatra with the legend ΒΑΣΙΛΙΣΣΑ ΚΛΕΟΠΑΤΡΑ in the nominative (with cursive E) and a reverse with the headdress of Isis and the legend ΑΓΙΑΣ ΛΥΣΩΝΟΣ ΠΑΤΡΕΩΝ (*RPC* 1. 1245). Its exact denomination is ambiguous, since its size and weight could make it either a hemiobol or *assarion*, "but similarities to the earlier hemiobols indicate that it too belongs to the traditional Greek bronze system" (Kroll 1997, 127). *RPC* claims that the magistrate is otherwise unknown, a premise, to my knowledge, heretofore unchallenged.

The issue has been explained as honorific, perhaps simply because Cleopatra was in town (Regling, *ZfN*, 1906, 395); indeed, this coin may not have been the only expression of Patras's homage to the Egyptian queen. Stephanos Thomopoulos, a nineteenth-century historian of Patras, reported that a relief of Cleopatra, which has since disappeared, was found in the city (Rizakis 1995, no. 99; Thomopoulos 1907, 170). It has also been argued that through the use of the title ΒΑΣΙΛΙΣΣΑ the city acknowledged "that Patras was in her power,"<sup>3</sup> but what kind of "power" such language entailed is unclear. Are we to believe that it can be dismissed as simply honorific, or did Patras really advertise Cleopatra as its queen? Is it possible to know more about the magistrate? Can we say more about the iconography? And, ultimately, were we to answer these questions, can we develop a picture that allows us to glean how Antony and Cleopatra were received in areas of Greece?

Let us start by discussing who minted the coin and the motivations behind its issue. Cicero's letters may tell us a little about the magistrate who minted the coin. In 46 BC, the orator wrote a letter to Servius Sulpicius Rufus, his Roman friend

3. *RPC* 1, p. 39. See also Koch, *ZfN*, 1924, 92n1.

acting as governor of Achaëa, to recommend his client and intimate friend Lyson of Patras. Cicero asked Sulpicius to receive Lyson as a friend and to look after the interests of Lyson's son, who unfortunately remains nameless in the letter. Lyson's son, Cicero relates, was adopted by a Roman exile, C. Maenius Gemellus, who became a citizen of Patras. Cicero specifically tells us that this adoption took place under the laws of Patras, and at the time of the letter Maenius had passed away, and Cicero wanted Sulpicius's help to ensure that Lyson's son received his proper inheritance.<sup>4</sup>

Could this son of Lyson be the magistrate of our coin, Agias the son of Lyson? Such a suggestion must remain speculative, but if Lyson's son were, as Cicero describes him, an *adulescens* at the time of the letter, it is not entirely implausible that he minted the coin of Cleopatra at Patras fourteen years later. Furthermore, for Achaëa, the name Lyson is only attested twice: in the letters of Cicero and on this coin (LGPN, vol. 3A). The name Agias is attested twice for Patras, once in the second/first century BC and on this coin (LGPN, vol. 3A). If the Lyson of Cicero's acquaintance and the issuer of the coin were indeed related this has important ramifications for how we read the coin. For Lyson was a member of a leading family in Patras with a history of involvement with the Romans. In the same letter of Cicero we learn that Lyson had been a Pompeian partisan, and after the defeat at Pharsalus he went to Rome and successfully found aid from his Roman patrons, including Cicero, so that his property was protected from Caesar (Cicero *ad Fam.* 13.19.1). Lyson's son was adopted by Maenius, a Roman exile, according to Patras's laws,<sup>5</sup> and Cicero makes it clear not only that Maenius was his client but that he himself has a special relationship with Lyson (*ad Fam.* 13.19.1: *Cum Lysonē Patrensi est mihi quidem hospitium vetus, quam ego necessitudinem sancte colendam puto*). In addition, it may be possible to offer further evidence of ties between Agias and Marc Antony. It has been suggested that Maenius Gemellus may have been the same scandalous Gemellus mentioned by Valerius Maximus who organized an outrageous banquet for his elite guests, including a consul and the tribunes (Valerius Maximus 9.1.8; *RE*, 14: 254, no. 20). If this is the same Gemellus, such behavior may have led to his exile in Patras. In this same passage, Valerius Maximus also says that two noblewomen, Mucia and Fulvia, were invited to the party that had turned his house into a brothel. Mucia was wife to Pompey

4. Cicero *ad Fam.* 13.19.2: *Quae ne singula enumerem, totam tibi domum commendo; in his adulescentem filium eius, quem C. Maenius Gemellus, cliens meus, cum in calamitate exsili sui Patrensis civis factus esset, Patrensiū legibus adoptavit; ut eius ipsius hereditatis ius causamque tueare.*

5. Because Maenius, a Roman exile and citizen of Patras, adopted Lyson's son according to local and not Roman laws, the adopted son may not have had to change his name or patronymic; see Smith (1967, 302–310).

and Fulvia was married to the scandalous Clodius and eventually, of course, Marc Antony. This information is undoubtedly tenuous, but if true, then Gemellus's association with Fulvia may help explain his adoptive son's later ties with Marc Antony. However, the manuscripts also have variant readings of the names Mucia and Fulvia, including the otherwise unknowns Munia, Fluvia, and Flavia.<sup>6</sup>

While the details of these personal relationships are tentative, the larger institution of Roman patronage in the provinces of which Agias was a resident was undeniably real. A system of patronage accompanied the Roman process of imperialism, and the political networks between Rome and her provinces that were cemented during the Republic evolved in the Late Republic into direct ties between Roman patrons and provincial cities and the local elite (Badian 1958). This process, of course, only accelerated and coalesced after Augustus, turning the emperor into the ultimate patron of the Roman Empire. For our purposes, it is notable that Mark Antony and Cleopatra's eventual quartering in Patras in the winter of 32 BC was but the final stage in Antony's creation of social networks in Greece. Consequently, a consideration of his career in the region helps us attain a larger historical and numismatic context for Agias's and Patras's subsequent attraction to Cleopatra, and a realization that Patras was not anomalous in its veneration of the Egyptian queen.

Antony stayed in Athens after his defeat of Brutus and Cassius in 42 BC at Philippi and, as stated above, in 40 BC he was officially accorded Greece as a part of the division of land in the Treaty of Brundisium. Why Antony showed such a strong interest in this province after the death of Caesar is not too difficult to comprehend; it formed a crossroads where he could watch Octavian in the West as well as raise revenue for his Eastern campaigns (Amandry 1982/3, 1). As one of Antony's favorite places of residence during the Triumviral period, Athens's coinage indirectly reflects his presence. Athenian bronze coinage dated to 39–37 BC, when Antony and Octavia wintered in Athens as newlyweds, has Dionysus on the obverse, perhaps in honor of Antony as the "New Dionysus" (Kroll 1993, 84–85, 103, cat. nos. 140–142); this is the first and only time until Hadrian that Dionysus is depicted on the obverse of Athenian coins.<sup>7</sup> Furthermore, Antony's influence extended to the recently established Roman colonies of the Peloponnese. In the coinage issued by the *duoviri* of Corinth, a striking number of men have direct

6. Flavia, however, is a likely corruption due to the name's late antique usage as a status marker.

7. The reverse depicts Athena advancing r., holding lowered spear in r. hand; aegis draped over extended l. arm, which Kroll suggests alludes to Antony's marriage with Athena. He also notes that this phenomenon was paralleled in Ephesus, where cistophoric tetradrachms of the same year have Antony's portrait with the ivy wreath and a standing Dionysus on the reverse.

connections with Antony. This includes Marcus Insteius Tectus, a man who besieged Brutus at Mutina with Antony in 43 BC and issued coins just a year later in Corinth (RPC 1.1118–21), and three men who as freedmen agents of Antony minted coins as *duoviri*: M. Antonius Orestes in 40 BC (RPC 1.1122–3), M. Antonius Theophilus in 30 BC (RPC 1.1129–30), and his son M. Antonius Hipparchus (RPC 1.1134–5) at the end of the first century BC (Spawforth 1996, 170; Amandry 1982/3, 2; 1988, 26–43).<sup>8</sup> Moreover, Corinth minted coinage with Marc Antony's portrait between 39–36 BC under the *duoviri* P. Aebutius and G. Pinnius (RPC 1.1124–6; Amandry 1988, 36–37).<sup>9</sup> The colony at Dyme also offers numismatic evidence demonstrating that Antony led a second *deductio* at the site. Originally called *Colonia Iulia Dumaeorum* and abbreviated CID on its legends (RPC 1.1283–4), in 39–36 BC a new name appears with the abbreviation CIAD, or *Colonia Iulia Antonia Dumaeorum* (RPC 1.1285). Antony clearly hoped to solidify his social networks in Greece, and thus connected himself with colonies and colonists that were naturally, but significantly, made up of veterans.

Antony's influence was also felt through the legates he left in charge of his affairs when he was absent on his Eastern campaigns. L. Sempronius Atratinus was Antony's *anti strategos* in Greece between 39–36 BC (ILS 9461 = IG IX, 2, 39), and several different coinages attributed to Atratinus were issued while he was allied with Antony, including one at Sparta and the so-called Fleet coinage.<sup>10</sup> The extent of his authority as a legate of Antony, however, was even documented at Patras; in an inscription honoring his wife Marcia Censorina, he is entitled the "patron" and "euergetes" of the city (Rizakis 1998, no. 33; Moretti 1980/4).<sup>11</sup>

Things change, however, as we move later into the 30s BC, when it is clear that Antony aligned himself more closely with Cleopatra and the two begin to share room on coinage. Since this phenomenon parallels Patras's Cleopatra coin, it is

8. For Theophilus, see also Plutarch *Ant.* 67.7, who states that Antony wrote to Theophilus after his defeat at Actium asking that Theophilus safely hide his friends in Corinth until they made peace with Octavian. Plutarch relates that his son Hipparchus was good friends with Antony and, living in Corinth, was the first of Antony's freedmen to join Octavian's camp. This is confirmed by the numismatic evidence, whereby Hipparchus as *duovir* issued coins with the portrait of Augustus and, among other things, his grandsons Lucius and Gaius.

9. It seems this issue's types were directly influenced by the *aurei* and *denarii* issued by Antony and Cn. Domitius Ahenobarbus in 41–40 BC in Asia Minor after their reconciliation. See *BMCRR* (2: 494–495), Sydenham nos. 1178–1179a, and *RRC* no. 521.

10. Sparta: RPC 1, no. 1101. "Fleet-coinage": RPC 1, nos. 1453–1461; see further Amandry 2008, 421–434. Two other coinages are attributed to Atratinus, that of Ionia or the Troad (RPC 1, no. 2226) and two issues of Sicily (RPC 1, nos. 653, 655).

11. For this Patrean inscription and another honoring Marcia Censorina as daughter of L. Marcus Censorinus (governor of Achaia and Macedonia in 42–40 BC), see Rizakis, Zoumbaki, and Kantirea (2001, nos. ACH 164, 212, pp. 86, 95).

well worth pursuing the Greek issues that relate to the Ptolemaic queen. Although her portrait appears frequently further east in the Mediterranean, her iconography seems to have pervaded Greece as well, despite the fact that this was not territory granted to her or her children by Antony. Aegium issued coins signed by Theoxios-Kletaios that have the head of Dionysus on the obverse and a standing eagle on the reverse. Kroll argues that the head of Dionysus is a reference to Antony and the eagle to Cleopatra and thus dates this coinage and the other issues signed by the same magistrate to just before Actium, based on the fact that in 32 BC Antony divorced Octavia and declared his alliance with Cleopatra (Kroll 1993, 233, cat. nos. 732–733).

Athens also put out coinage with the obverse of Zeus and a reverse of either a bearded Dionysus or eagle on a thunderbolt (Kroll 1993, 104–105, cat. nos. 144–145). Since this is the only time that Athens emitted any coinage with the eagle as a device, and the reverse type of Dionysus was issued contemporaneously, it is likely, that iconographic reference is being made to both Antony and Cleopatra (Kroll 1993, 105).<sup>12</sup> That the Athenians would do so should not be so surprising, since we know they honored Antony and Cleopatra in other ways; according to Dio Cassius (50.15.12), the city set up statues of Cleopatra and Antony in the guise of gods on the Acropolis that were hurled down by thunderbolts as portents of their coming defeat at Actium. Kroll argues that we cannot date these coins until 32 BC because Cleopatra was unpopular with the Athenians, who loved Octavia, and thus did not win honors from them until that year (Plutarch *Ant.* 57.1–2); to that end the Athenians would only “refer to the Kingdom of Egypt rather than to Kleopatra, the new Isis, directly” (Kroll 1993, 104).

If we accept Kroll’s argument, then the minting of the Cleopatra coin at Patras fits into a larger pattern of numismatic evidence. In other words, Antony was clearly proactive in his role as patron of certain cities in Greece, and this is clearly demonstrated numismatically. Nonetheless, the possible appearance of Cleopatra in other civic coinages of Greece (i.e., Athens and Aegium) adds a new dimension to Agias’s coin at Patras and demonstrates that her presence as a Hellenistic patron had been added to Agias’s status as a Roman client. Although Lyson’s family had been under the patronage of Cicero and had once traveled to Rome to settle accounts and protect their interests in Greece, this coin shows that the family had redirected their allegiance to Cleopatra, to whom Antony was now allied, in order to protect their interests. This is indicative of where Agias thought he should turn

12. Nonetheless, it is still perhaps curious that a more direct allusion to Cleopatra was not chosen, especially considering that her role as the New Isis might more aptly complement Antony’s role as the New Dionysus.

as a client. That is to say that Agias's services as a client, supporter, and local advocate were focused on Cleopatra, more than likely with Antony's blessing, and thus the perceived center of power had shifted to Alexandria rather than Rome for this leading family in the East. Kroll has also briefly argued along these lines for this Patrean coin not based on the magistrate but on its denomination and imagery: "Cleopatra herself was a Greek queen, and may have been honored above all because her kingdom represented a hopeful alternative to Roman dominance. If so, the absence of a Patras portrait coin for Antony was not mere oversight" (Kroll 1997, 127).

The reasons, beyond Antony's encouragement, that Agias would accept Cleopatra as a patron can be deduced from the imagery on the coin. Since the absence of Antony is striking, it should be discussed first. His nonappearance has several possible explanations, not all mutually exclusive. First, the Senate had declared war only on Cleopatra (Dio 50.4.4–5), and since the war was nominally against her and her alone, the city advertised its support of the official enemy of the Roman empire with this coin. This fact cannot be emphasized enough and is too often ignored by the brief commentaries on this issue. The decision to honor Cleopatra while she was the declared enemy of Rome with her portrait and, in particular, in the name of a local magistrate, deserves primary attention. Agias's advertisement that he had something to do with minting this coin was undoubtedly a bold political move, since it publicized the connections that he and Patras possessed with an enemy of Rome. This was dangerous, because as a client ruler Cleopatra had not only failed to respect the *maiestas populi Romani* but was actively threatening it (Reinhold 1981/2); thus Patras was supporting an official betrayer of *fides* as its own patron. Furthermore, as we have seen, Agias's family may have had a history of personal connections with Rome.

But who would have seen this rather seditious coin? The small denomination of the coin suggests that it was intended for circulation in local markets and was presumably seen by Patreans, Antony's and Cleopatra's soldiers, and neighboring cities; thus the coin's advertisement that Patras supported the queen, and the lack of any reference to Antony, symbolically reinforced the absence of Rome in the mind of the local observers of the coin. Hence the advertised adherence to Cleopatra may have been meant implicitly to boost local support for Antony and Cleopatra rather than simply to serve as an honorific image. I would also suggest that Cleopatra was a suitable figure for the coinage since her name is in part shared with the *polis* (i.e., CleoPATRA); coins that used wordplay as a basis for types were, of course, not uncommon in Greece.

Why Cleopatra should have any appeal, however, still needs to be explained. It should be kept in mind that the unpopularity of Roman rule in Greece was a problem for the Triumvirate and, in fact, had to be addressed by Augustus after

Actium (Levick 1996, 651ff). Perhaps, then, Antony's promotion of Cleopatra as his ally was his attempt to quell Greek discontent over Rome's rather unfamiliar cultural presence, because the influence of a Macedonian monarch was more familiar. Michael Grant already addressed this problem when he wrote: "[Cleopatra's] contribution to the principate was a warning that, if Greek symbolism was necessary to rule the Greeks, the *princeps* must, without a Greek colleague, combine it in his own many-sided Imperial personality. . . . For [a] numismatic study she and Antony illustrate the complexity of the Romano-Hellenistic tradition to which Augustus's portrait-coinage succeeded" (*FITA*, 374).

Patras was a Greek city openly honoring a Hellenic queen, and thus a motivating factor for issuing this coinage was an acknowledgment of a shared cultural heritage not as yet recognized with Rome. Moreover, it was not unusual for Hellenistic monarchs to fight alongside Roman generals, so Antony's promotion of the queen would not have been completely without precedent or purpose, especially if he wanted to ensure the loyalty of the provinces by encouraging Cleopatra's influence in the East.

But how "Hellenic" could Cleopatra have seemed to the Greeks, especially given that her kingdom had its foundations in Egypt and was of Macedonian descent? Such a supposition may even be undermined by the appearance of the Isis headdress on the reverse and its concomitant Egyptian heritage. It has been suggested that this headdress is a reference to an actual cult of Isis at Patras (Rizakis 1995, 184, no. 273), in which case it would be the only evidence for it at this time; but such an interpretation is also unnecessary. Cleopatra was widely referred to as the "New Isis" (Plutarch *Ant.* 54.6; Dio 50.5.3, 50.25.3). Nonetheless, as far as the numismatic evidence is concerned, the headdress seems to have been used only as a control mark on Cleopatra's coins in Alexandria (*BMC, Ptolemies Kings of Egypt*, p. 122, no. 1), and it has no direct parallel as a type anywhere in the Mediterranean during this period, although the famous Syrian coins with Cleopatra's and Antony's portrait and the legend ΒΑΣΙΛΙΣΣΑ ΚΛΕΟΠΑΤΡΑ ΘΕΑ ΝΕΩΤΕΡΑ probably offer numismatic evidence for Cleopatra's connection with the epithet "New Isis" further east.<sup>13</sup> The eagle and thunderbolt type was *not* chosen as a reverse at Patras, unlike at Aegium and Athens. Instead the coin bore an image of the queen as a goddess that Greeks already associated with Cleopatra.

Although post-Actium Roman poets famously used Isis's religious symbolism as a language for denouncing Eastern fanaticism (Wyke 2002, 212–214), this same Roman climate that was hostile toward the cult of Isis also did not recognize the popularity of the cult throughout the Mediterranean, let alone the city of

13. *RPC* 1. 4094–6. On the reading of this legend see Howgego (1993, 203) contra Buttrey 1954.

Rome. The cult of Isis had spread dramatically across the Mediterranean by the first century BC, and not just in those areas that were influenced by the Ptolemaic Empire (Goudchaux 2001, 130–131), such as southern Asia Minor (Magie 1953). The role of Greeks as much as Egyptians in disseminating the cult should not be underestimated (Bricault 2001, 148); for example, inscriptions concerning Corinthian devotees of Isis are found within and outside Corinth in the second and first centuries BC (Smith 1977, 225–227). Furthermore, the cult's expansion had begun to transform the Egyptian nature of the cult, especially given that traders from non-Egyptian regions were the ones exporting the cult, so that it gained a universal appeal untethered by strictly Egyptian connotations (Goudchaux 2001, 131; Smith 1977, 228ff). Although in Cleopatra's period such a transformation did not completely remove Egypt from conceptions of the cult, the use of the headdress did not necessarily make Cleopatra—to Greek eyes—the exotic foreigner that the later Augustan poets presented.

With all of this in mind, then, how does this coin complete our picture of the historical circumstances of one city in Greece at the end of the Republic? As stated above, Patras was an area with important western ties before the appearance of Antony, and his efforts to strengthen his authority in Achaea were of paramount importance when war finally broke out between him and his former brother-in-law. Antony came to dominate Achaea not only through his frequent visits to Greek cities and his network of Roman men with strong influence in the region, but also, if the son of Lyson was involved in this coinage, we can see that some Greek alliances had shifted from Rome to Alexandria with the encouragement of Antony. This coinage may not have been issued just because Cleopatra and Antony were in town; instead the coin might represent a family of former Roman clients redirecting their allegiance to those on whom they thought they could rely in order to protect their wellbeing. Again, it would be fascinating to know what plans Antony and Cleopatra possessed had they been victorious, and here there is an indication that a local city was ready to face that future. Indeed, we can then dismiss the notion that because her customary title *BASILISSA* is used Patras was under her singular control; what plans Antony and Cleopatra had were they successful in conquering Octavian remains necessarily in doubt, but we might gather that joint rule was not out of the question.

Of course Antony and Cleopatra lost their battle, and what happens next in Patras's coinage is extremely telling, although the following interpretation may prove controversial. A silver coin of Patras has the head of Zeus on the obverse and a wreath encircling the name of Agys Aischrionos on the reverse with the monogram of Patras (RPC 1.000; Fig. 2). Although the date of this coin was originally believed to be pre-146 BC, recent work has suggested a post-146 date (Boehringer 1991; Warren 1999b). Warren, moreover, has proposed an exact date for this coin



based on the wreath of the reverse. This wreath does not look like conventional Greek wreaths, and in particular the arcs at the bottom of the wreath cannot be ribbons, which instead are at the top of the wreath. Rather, she suggests, these arcs represent the prows of ships. This wreath, then, would be a *corona navalis*, the crown awarded for naval victories.<sup>14</sup> Furthermore, Agrippa is the only certain recipient of this crown up to and including the reign of Augustus for services rendered against Sextus Pompeius in 36 BC.<sup>15</sup> Dio tells us that Agrippa took Patras in 31 BC, after the blockade of Actium had begun (Dio 50.13.5), on the basis of which Warren suggests that this coin was issued in that year with the depiction of the crown “as a flattering reference to Agrippa and to placate him and Octavian after the city’s previous support of Antony and Cleopatra” (Warren 1999, 387n55). Walker has subsequently adopted this date and used it tentatively to date other possible post-146 coins.<sup>16</sup>

How soon this coin was minted after Actium is uncertain, especially since the date for the founding of the colony of Patras is controversial. No source—literary, epigraphic, numismatic, or archaeological—gives a precise date for the original founding, and it has been suggested that a date of 16 BC or 14 BC is appropriate (Rizakis 1998, 24n7). Rizakis, however, has also argued that there were two foundations of the colony: one *immediately* after Actium and another in 16/5 BC, and that is why there are contradictions in the sources (Rizakis 1998, 24–28). This coin may have a bearing on the debate, since it was struck in the name of the Greek city, not the Roman colony. If Warren’s suggestion is correct that these types were introduced following Agrippa’s capture of Patras in 31 BC “to placate him and Octavian after city’s previous support of Antony and Cleopatra” (Warren 1999, 387n55), then this suggests that the foundation of the colony was not immediate.

It has been noted that after Actium, Augustus instituted a policy to stabilize Greece, and the establishment of Roman colonies was meant to create sites favorable to Rome that were situated among the Greek cities (Rizakis 1997, 15; Alcock 1993, 141). If Patras was soon turned into a colony after Actium, then it was

14. While the other depictions of the *corona navalis* on coins do not look exactly like this Patrean coin (so Maxfield [1981, pl. 1a–c], citing *BMCRE* Augustus 721, *BMCRE* Augustus 669, and *BMCRE* Tiberius 161), artistic license could explain the variability of appearance.

15. Maxfield 1981, 75, citing Livy *Perioch.* 129, Velleius 2.81.3, Seneca *de Benef.* 3.32.4, Pliny *Nat. Hist.* 16.3, Dio 49.14.3. Maxfield also notes that Pliny the Elder is the only literary source that tells us of another recipient of this award. According to Pliny the Elder, Pompey the Great gave the crown to Varro for his help against the pirates. Although Maxfield wisely does not dismiss Pliny’s story, Agrippa is still the only recipient who would matter for Patras.

16. See LHS Numismatics, Auction 96, 8–9 May 2006. *Coins of Peloponnesos: The BCD Collection* (138).

not necessarily punished for its support of Antony. Indeed, Pausanias tells us that when the colony was founded by Augustus, "he granted freedom to the Patraeans, and to no other Achaeans; and he granted also all the other privileges that the Romans are accustomed to bestow on their colonists" (Pausanias 7.18.7). Furthermore, Patras seems to have been given authority over the territories of southern Aetolia, cities of West Lokris (with the exception of Amphissa), and the lake of Kalydon (Strabo 10.2.21; Pausanias 7.18.8, 10.38.9; Rizakis 1998, 28n4; Kahrstedt 1950). The statue of Artemis Laphria that was originally from Kalydon was also given to Patras (Pausanias 7.18.8). Indeed, the image of Artemis Laphria would become quite prevalent in the coinage of Patras from the time of Nero, perhaps as a testament to Augustus's gift and to the imperial cult as well, which we know was connected with the cult of Artemis Laphria at Patras.

Agreeing with Warren's assessment of this coin, then, we must assume that someone at Patras, if not Agys himself, knew how to pay homage to Agrippa and his achievements directly without having to put his portrait on the coin. These silver coins may have been used to help pay the victor's troops after Actium, and this naval symbol therefore may have also been especially appropriate since Octavian's triumph was accomplished by his fleets. The immediacy with which these coins were struck is particularly remarkable when we think that Augustus may have penalized Patras by ensuring that Roman veterans governed the city but also rewarded it with the privilege of synoecism. The *princeps's* vision seems to have been of colonies existing as a fusion of Roman and Greek elements, which is indeed the message that was blessed by Antony with the minting of Agias's coin in the winter of 32 BC, as I have argued above.

We shall end here at the opening of the Roman Empire, but it is worth noting again that two coins from the city of Patras have enabled us to glimpse the world of local politics at a time when Octavian's victory was far from certain. Patras may have had a natural affinity to Cleopatra for several reasons, including a shared ancestry and, to a certain extent, onomastics, but here we have also seen the local elite display their loyalty via their knowledge of sophisticated imagery and detail. For on one coin, Agias, the son of Lyson, knew to display the Isis headdress and thus herald all of the connotations of Cleopatra as a New Isis that were already demonstrated by statues at Athens. Subsequently, Agys Aischronios demonstrated loyalty to Octavian and Agrippa by the image of the *corona navalis*, revealing the martial prowess, domination, and skill of the new ruling family. Ultimately, Agys Aischronios's coin also proves that Patras was not punished for its previous fidelity to the foreign queen (and Antony), and thus as the *pax Augusta* settled in so ended the need for the city to choose sides. If anything, these two coins remind us that Rome's treatment of its provinces required a delicate touch, and although leading Roman men were intrusive in local politics, it was also the case that under Roman

imperialism certain elements of regional identities could not be denied, even if they were tamed.

## REFERENCES

- Alcock, S. 1993. *Graecia Capta: The Landscapes of Roman Greece*. Cambridge.
- Amandry, M. 1982/3. Monnayages émis en Achaïe sous l'autorité d'Antoine (40–31). *Israel Numismatic Journal* 6–7: 1–6.
- . 1988. *Le monnayage des duovirs corinthiens*. Bulletin de Correspondence Hellénique supplement 15. Paris.
- . 2008. Le monnayage de L. Sempronius Atratinus revisité. *American Journal of Numismatics* 20: 421–434.
- Badian, E. 1958. *Foreign Clientelae (264–70 BC)*. Oxford.
- BMC = *Catalogue of Greek Coins in the British Museum*.
- BMCRE = *British Museum Catalogue of Coins of the Roman Empire*.
- BMCRR = Grueber, H. A. 1910. *Coins of the Roman Republic in the British Museum*, 3 vols.
- Boehringer, C. 1991. Zur Geschichte der achaischen Liga im 2. und 1. Jh. v. Chr. im Lichte des Münzfundes von Poggio Picenze (Abruzzen). In *Achaia und Elis in der Antike, Akten des 1. Internationalen Symposiums, Athen, 19–21/5/1989*, AD. Rizakis, ed., 163–170. MEΛΕΤΗΜΑΤΑ 13. Athens.
- Bricault, L. 2001. Pénétration et implantation des cultes Isiaques en Grèce centrale. *The Ancient World* 32 (2): 147–152.
- Buttrey, T. 1954. THEA NEOTERA on coins of Antony and Cleopatra. *American Numismatic Society Museum Notes* 6: 95–109.
- FITA = Grant, M. 1969. *From Imperium to Auctoritas*. Repr. of 1946 ed. Cambridge.
- Goudchaux, G. W. 2001. Cleopatra's subtle religious strategy. In *Cleopatra of Egypt: From History to Myth*, S. Walker and P. Higgs, eds., 128–141. Princeton, N.J.: Princeton University Press.
- Howgego, C. 1993. Review of *Roman Provincial Coinage*. *Journal of Roman Studies* 83: 199–203.
- Jones, P. J. 2006. *Cleopatra: A Sourcebook*. Oklahoma Series in Classical Culture.
- Kahrstedt, U. 1950. Die Territorien von Patrai und Nikopolis in der Kaiserzeit. *Historia* 1: 549–561.
- Kroll, J. 1993. *The Greek Coins*. Athenian Agora 26. Princeton, N.J.: The American School of Classical Studies at Athens.
- . 1997. Traditionalism versus Romanization in bronze coinages of Greece, 42–31 BC. *Topoi* 7 (1): 123–136.
- Levick, B. 1996. Greece (including Crete and Cyprus) and Asia Minor from 43

- BC to AD 69. In *CAH*, A. K. Bowman, E. Champlin, and A. Lintott, eds., X<sup>2</sup>: 41–675.
- LGP*N = Fraser, P. M., and E. Matthews. 1997. *A Lexicon of Greek Personal Names*. Oxford.
- Maxfield, V. A. 1981. *The Military Decorations of the Roman Army*. London.
- Magie, D. 1953. Egyptian deities in Asia Minor in inscriptions and on coins. *American Journal of Archaeology* 57 (3): 163–187.
- Moretti, L. 1980/4. Due patroni per Patraso. *Rivista di Filologia* 108: 448–452.
- Papageorgiadou-Bani, H. 2004. *The Numismatic iconography of the Roman colonies in Greece: Local spirit and the expression of imperial policy*. Research Center for Greek and Roman Antiquity, National Hellenic Research Foundation, MEΛETHMATA 39. Athens.
- Pelling, C. B. R. 1988. *Plutarch: Life of Antony*. Cambridge Greek and Latin Classics.
- RE* = A. Pauly, G. Wissowa, and W. Kroll. *Real-Encyclopädie d. klassischen Altertumswissenschaft*. 1893–.
- Reinhold, M. 1981/2. The declaration of war against Cleopatra. *The Classical Journal* 77 (2): 97–103.
- Rizakis, A. 1988. Le port de Patras et les communications avec l'Italie sous la République. *Cahiers d'Histoire* 33 (3–4): 453–472.
- . 1989. La colonie romaine de Patras en Achaïe: Le témoignage épigraphique. In *The Greek renaissance in the Roman Empire*, S. Walker and A. Cameron, eds., 180–186. London.
- . 1995. *Achaïe I: Sources textuelles et histoire régionale*. MEΛETHMATA 20. Athens.
- . 1997. Roman Colonies in the Province of Achaia: Territories, Land and Population. In *The Early Roman Empire in the East*, S. E. Alcock, ed., 15–36. Oxford.
- . 1998. *Achaïe II: Le cité de Patras: Épigraphie et histoire*. MEΛETHMATA 25. Athens.
- . 2001. Les cités péloponnésienes entre l'époque hellénistique et l'Empire: le paysage économique et social. In *Recherches récentes sur le monde hellénistique, Actes du colloque international organisé à l'occasion du 60e anniversaire de Pierre Ducrey: Lausanne, 20–21/11/1998*, R. Frei-Stolba and K. Gex, eds., 75–96, Bern.
- , Zoumbaki, S., and Kantirea, M. 2001. *Roman Peloponnese I. Roman Personal Names in their Social Context*. MEΛETHMATA 31. Athens.
- RPC* = Burnett, A., M. Amandry, & Père P. Ripollès, eds. 1992. *Roman provincial coinage I*. London.
- RRC* = Crawford, M. H. 1974. *Roman republican coinage*, vols. 1–2. Cambridge.

- Smith, D. E. 1967. Greek Adoptive Formulae. *Classical Quarterly* XVII: 302–310.
- . 1977. The Egyptian cults at Corinth. *The Harvard Theological Review* 70 (3/4): 201–231.
- Spawforth, A. J. S. 1996. Roman Corinth: The formation of a colonial elite. In *Roman onomastics in the Greek east: Social and political aspects*, A. D. Rizakis, ed., 167–182. MEΛETHMATA 21. Athens.
- Sydenham = Sydenham, E. A. 1976. *The coinage of the Roman republic*. New York: Sanford J. Durst.
- Thomopoulos, S. 1907. *Historia tes poleos Patron: apo ton archaiotaton chronon mechri tou 1821*. 2nd ed. En Patrais: Chr. Variantzas.
- Walker, S., and P. Higgs. 2001. *Cleopatra of Egypt: From history to myth*. Princeton, N.J.: Princeton University Press.
- Warren, J. 1999. More on the “new landscape” in the late Hellenistic coinage of the Peloponnese. In *Travaux de numismatique Grecque offerts a Georges LeRider*, M. Amandry and S. Hurter, eds., 375–393. Spink.
- . 1999b. The Achaian League silver coinage controversy resolved: A summary. *Numismatic Chronicle* 159: 99–109.
- Williams, J. H. C. 2001. “Spoiling the Egyptians”: Octavian and Cleopatra. In *Cleopatra of Egypt: From History to Myth*, S. Walker and P. Higgs, eds., 190–199.
- Wyke, M. 2002. *The Roman Mistress*. Oxford: Oxford University Press.
- ZfN = *Zeitschrift für Numismatik*.

## Le monnayage de L. Sempronius Atratinus revisité

PLATES 86–95

MICHEL AMANDRY\*

This article presents an updated catalogue of the coinage of L. Sempronius Atratinus and new thoughts on the minting location, date, and denominations of the coinage.

Près de vingt ans se sont écoulés depuis la parution du corpus du monnayage de ceux que l'on appelle traditionnellement les «préfets de la flotte» d'Antoine.<sup>1</sup> Après avoir repris l'étude du numéraire de L. Calpurnius Bibulus en 1998,<sup>2</sup> il m'a semblé utile de revisiter aujourd'hui le monnayage de L. Sempronius Atratinus.

\*michel.amandry@bnf.fr

1. M. Amandry, "Le monnayage en bronze de Bibulus, Atratinus et Capito," *Revue suisse de Numismatique (RSN)* 65, 1986, p. 73–103 (article cité ici Amandry 1986); *RSN* 66, 1987, p. 101–133 et *RSN* 69, 1990, p. 65–96. On retrouve ces monnayages dans A. Burnett, M. Amandry et P. P. Ripollès, *Roman Provincial Coinage (RPC) I. From the death of Caesar to the death of Vitellius (44 BC–AD 69)*, Londres-Paris, 2006<sup>3</sup>. Pour le matériel supplémentaire publié ici, mes remerciements vont à C. Clay, J. Guillemain, F. Planet, C. Stannard, H. Voegtli, R. Witschonke.—Les monnaies reproduites sur les planches sont marquées d'un astérisque—Il m'est particulièrement agréable de contribuer au volume du 150<sup>e</sup> anniversaire de l'ANS. Peu de sociétés numismatiques savantes ont été créées avant l'ANS : la Royal Numismatic Society en 1836 et la Société royale belge en 1841. Toutes les autres grandes sociétés européennes sont nées après 1858 (1865 en France ; 1873 en Suède ; 1879 en Suisse enfin 1892 en Italie). Mon premier contact avec l'ANS date de 1984 : bientôt 25 ans de contacts fréquents, d'amitiés fidèles, de souvenirs communs festifs.

2. M. Amandry, "The coinage of Bibulus again," *Coins of Macedonia and Rome : Essays in Honour of Charles Hersh* (éd. A. Burnett, U. Wartenberg et R. Witschonke), Londres, 1998, p. 185–188 et pl. 26–28.

## CATALOGUE

On trouvera la liste des collections publiques et privées dans *RSN* 65, 1986, p. 76–77. Il convient d'y ajouter la collection du Castelvechio de Vérone publiée par F. Schmidt-Dick et al., *Die Römischen Münzen des Medagliere im Castelvechio zu Verona*, *TNRB* 9, Vienne, 1995.

## I. Série lourde

A. Sesterce, bronze au plomb, 33–38 mm, 20,36 g (15 exs.). Axe: variable *RSN* 65, 1986, p. 80–81, A et *RSN* 69, 1990, p. 66 (*corrigendum*) et 67 (*addenda*); *RPC* 1453; Sear<sup>3</sup> 279  
**M•ANT•IMP•TER•COS•DES•ITER•ET•TER•III•VIR•R•P•C**; tête nue d'Antoine à gauche faisant face au buste drapé d'Octavie à droite  
**L•ATRATINVS•AVGV•R•COS•DESIG**; quadrige d'hippocampes à droite conduit par un couple (Antoine et Octavie représentés en Poséidon et Amphitrite); dans le champ à gauche, HS; sous le quadrige, Δ et osselet.

- |     |    |    |    |   |
|-----|----|----|----|---|
| 1.* | D1 | R1 | a. | Bologne 185; 22,30 g; 8h.   |
| 2.* |    |    | b. | Vente Numismatica Ars Classica 15, 18/V/1999, 230; 22,70 g; 2h.   |
| 3.* | D2 | R2 | a. | New York ANS 1944.100.7100; 21,77 g (percée); 1h.   |
| 4.  |    |    | b. | Coll. RBW (ex <i>NumCirc</i> vol. LXXIX, n° 3, March 1971, 2747 et vol. LXXXV, n° 10, October 1977, 9735; Triton XI, coll. Villemur, 8–9 Jan. 2008, lot 450); 20,80 g; 12h.   |
| 5.  |    |    | c. | Florence 35824; 16,05 g; ?.   |
| 6.* | D2 | R3 | a. | Vente Birkler et Waddell, 7/XII/1979, 284 (ex Sotheby, coll. Montagu, 23–28/III/1896, 687; Glendining, coll. Hall, I, 19/VII/1950, 685; MM/Leu, coll. Niggeler, 21–22/X/1966, 991; MM LII, 19–20/VI/1975, 508); 20,62 g; ?. |
| 7.  |    |    | b. | Venise Museo Archeologico 3850; 25,33g; 12h.  |
| 8.* | D2 | R4 | a. | Vente Hauck et Aufhäuser 14, 6–7/X/1998, 272; 18,03 g; 9h.  |
| 9.* | D2 | R5 | a. | Coll. C. C. Vermeule (ex Glendining, coll. Ryan, 2/IV/1952, 2245); 20,99 g; 2.  |

3. D. R. Sear, *The history and coinage of the Roman Emperors 49–27 BC*, Londres, 1998.

- 10.\* D3 R5 a. Budapest 33/1959; 29,30 g; 9h.
- 11.\* D3 R6 a. Berlin 1203/1931; 19,74 g; 6h.
- 12.\* D3 R7 a. Coll. L. Chaurand; 17,07 g; ?.
- 13. b. Paris BnF FG 851; 14,82 g; 9h.
- 14. D3 R8 a. Rome SPQR Medagliere comunale; 20,33 g (percée en deux endroits); ?.
- 15. D3 R? a. Zurich ZB 510; 15,66g; 11h.

B. Tressis, bronze, 30–35 mm, 16,69 g (8 exs.). Axe: var.

RSN 65, 1986, p. 81, B et RSN 69, 1990, p. 67, *addenda*; RPC 1454; Sear 280

M·ANT·IMP·TER·COS·DES·ITER·ET·TER·III·VIR·R·P·C; têtes nues accolées d'Antoine et d'Octave à gauche faisant face au buste drapé d'Octavie à droite

L·ATRATINVS·AVGV·R·COS·DESIG; trois galères sous voile à droite; au-dessus des proues, lituus; au-dessous, Γ et triskèle.

- 1.\* D1 R1 a. Vienne 35875; 17,22 g; 11h.
- 2. b. Cortona; 14.85 g; ?.
- 3.\* D1 R2 a. Vente J. Malter XXVIII, coll. V. Ruzicka, 8/XII/84, 18; 19,20 g; 3h.
- 4.\* D2 R1 a. Coll. RBW (ex Peus 355, 27/IV/1998, 246); 14,40 g; 2h.
- 5.\* D2 R2 a. Rome Museo nazionale; 17,19 g; ?.
- 6.\* D2 R3 a. Berlin 220/1907 (ex J. Hirsch, coll. I-B, 27/V/1907, 494); 16,73 g; 6h.
- 7.\* D2 R4 a. Vienne 35873; 17,50 g; 8h.
- 8.\* D3 R5 a. Coll. RBW (ex VSO C. Burgan, 30/VI/1987, 355; Vente Numismatica Ars Classica 1, 29–30/III/1989, 756); 16,45 g; 7h.



C. Dupondius, bronze au plomb, 24–31 mm, 11,81 g (19 exs.). Axe: variable  
RSN 65, 1986, p. 82, C et RSN 69, 1990, p. 67, *addenda*; RPC 1455; Sear  
281

M•ANT•IMP•TER•COS•DES•ITER•ET•TER•III•VIR•R•P•C; têtes nues accolées  
d'Antoine et d'Octave à gauche faisant face au buste drapé d'Octavie à  
droite

L•ATRATINVS•AVGV•COS•DESIG; deux galères sous voile à droite; au-  
dessus, de part et d'autre des voiles, bonnets des Dioscures; au-dessus ou  
devant les proues, lituus; au-dessous, B

- 1.\* D1 R1 a. Oxford; 11,80 g; 1h.
2. b. New York ANS 1944.100.7105; 11,33 g; 12h.
3. c. Coll. RBW (ex vente Elsen 64, 2/XII/2000, 744);  
11,56 g; 11h.
- 4.\* D1 R2 a. Vérone 2952; 11,16 g; 2h.
- 5.\* D1? R3 a. Classical Numismatic Group Electronic Auctions 188,  
28/V/08, 193 (ex coll. S. Wagner); 11,42 g; 3h.
- 6.\* D2 R4 a. Munich; 13,16 g; 3h.
- 7.\* D2 R5 a. Utrecht GM 1914; 10,21 g; 10h.
- 8.\* D2 R6 a. Vienne Université; 11,39 g; ?.
- 9.\* D2 R7 a. Coll. RBW (ex vente Vecchi, coll. Fallani, 13/IX/1996,  
640); 9,60 g; 9h.
10. D2 R? a. Vienne 5413;<sup>4</sup> 8,15 g; 5h.
- 11.\* D3 R8 a. Oslo UMK 70; 14,60 g; 6h.
- 12.\* b. Vienne 35874; 13,94 g; 12h.
13. c. Autrefois coll. P. V.; 10,34 g; 12h.
- 14.\* D3 R9 a. Vente Helbing 63, coll. Prix, 29/IV/1931, 315; 11,1 og; ?.
15. D3 R10 a. Coll. RBW;<sup>5</sup> 12,06 g; ?

4. Peut-être le coin R7, mais retouché.

5. "Acquis de Spink : reproduit dans," *The Celator* 14, 7, July 2000, p. 30.

16. D3 R11 a. Paris BnF FG 4599; 11,77 g; 12h.  
 17. D3 R12 a. Venise Museo Archeologico 3851; 14,22 g; 1h.  
 18.\* D3 R13 a. Paris BnF FG 4597; 9,72 g; 11h.  
 19. D? R13 a. Florence 38525; 16,70 g; ?.

## Autre exemplaire

20. D? R? a. Coll. RBW (ex vente Classical Numismatic Group MBS 61, 25/IX/2002, 1028; 9,75 g; 1h.

D. As, bronze, 22–24 mm, 9,68 g (21 exs.). Axe: variable

RSN 65, 1986, p. 82–83, D et RSN 69, 1990, p. 67, *addenda*; RPC 1456; Sear 282

M•ANT•IMP•TER•COS•DES•ITER•ET•TER•III•VIR•R•P•C; tête nue d'Antoine accolée au buste drapé d'Octavie à droite

L•ATRATINVS•AVGVR•COS•DESIG; galère sous voile à droite; entre la poupe et la voile ou sous la galère, A; sous la proue, tête de Gorgone; au-dessus de la proue, lituus

- 1.\* D1 R1 a. New York ANS 1944.100.7110; 11,49 g; 11h.  
 2.\* D1 R2 a. Glasgow H 1895; 7,71 g; ?.  
 3. b. Coll. RBW (ex vente Spink Genève 15–16/II/1977, 215); 10,74 g; 12h.  
 4.\* c. Copenhague 1264; 11,97 g; 9h.  
 5. d. Coll. RBW; 11,08 g; 2h.  
 6.\* D2 R3 a. Vienne 35878 (T 4107); 7,34 g; 12h.  
 7. b? Stock Lanz (1990); 12,04 g; 4h.  
 8.\* D2 R4 a. Berlin 60/1914; 9,24 g; 11h.  
 9.\* D2 R5 a. Berlin 969/1904; 9,58 g; 12h.  
 10.\* D2 R6 a. Autrefois coll. S. Wagner; 8,16 g; 12h.  
 11. D2 R7 a. Coll. RBW; 12,02 g; 10h.  
 12.\* b. Vérone 2953; 10,75 g; 9h.

- 13.\* D3 R8 a. Londres BM 1947-6-6-1439 (Cameron); 5,38 g; 1h.  
 14. b. Bologne 189 (droit et revers retouchés); 10,37 g; 3h.  
 15.\* D3 R9 a. Stock Santamaria (1982); 9,76 g; 3h.  
 16. b. Vienne 35876; 7,94 g; 12h.  
 17.\* D4 R10 a. New York ANS 1944.100.7107; 9,98 g; 12h.  
 18.\* D4 R11 a. New York ANS 1944.100.7108; 11,04 g; 6h.  
 19.\* D4 R12 a. Londres BM 1926-1-16-1018 (Seager); 8,70 g; 7h.

## Autres exemplaires:

20. D? R? a. Corinthe 74/13; 8,60 g; 1h.  
 21.\* b. Glasgow H 1894 (droit et revers retouchés); 9,46 g; ?.

## E. Semis, bronze, 15–18 mm, 4.36 g (2 exs.). Axe: variable

RSN 65, 1986, p. 83, E, RPC 1457; Sear 283

Légende illisible; tête nue d'Antoine à droite

L•ATRATINVS•AVGV•COS•DESIG; proue droite; au-dessus, S

- 1.\* D1 R1 a. Classical Numismatic Group MBS 78, 14/V/2008, 1236  
 (ex coll. P.V.); 4,75 g; 3h.  
 2.\* D1? R2 a. Coll. RBW (ex Elsen 64, 2/XII/2000, 746); 3,97 g; 9.

## F. Quadrans, bronze, 13–16 mm, 2,87 g (3 exs.). Axe: variable

RSN 65, 1986, p. 83, F et RSN 69, 1990, p. 67, *addenda*; RPC 1458; Sear 284

M•ANT•IMP•TER•COS•DES•ITER•ET•TER•III•VIR•R•P•C; tête janiforme

L•ATRATINVS•AVGV•COS•DESIG; chénisque ou lituus à droite; dans le champ, trois globules

- 1.\* D1 R1 a. Paris BnF 1982/1332; 2,09 g; 6h.  
 2.\* D1? R2 a. Coll. RBW (ex CNG MBS 76/1, coll. S. Wagner, 12 Sep.  
 2007, lot 1047); 3,71 g; 7h.  
 3.\* b. Liri; 2,80 g; 1h..

## II. SÉRIE LÉGÈRE

A. Sesterce, bronze au plomb, 27–32 mm, 12,18 g (17 exs.). Axe: variable  
 RSN 65, 1986, p. 83–84, A et RSN 69, 1990, p. 67 (*addenda*); RPC 1459;  
 Sear 291  
 Même description que I, A  
 Même description que I, A

- 1.\* D1 R1 a. Londres BM; 12,39 g; 12h.
2. D1 R2 a. Hanovre 3315a; 19,55 g; 3h.
- 3.\* D1 R3 a. Coll. RBW (ex vente A. Malloy MBS XX, 20/VII/1984, 325); 8,75 g; 3h.
- 4.\* b. New York ANS 1944.100.7102; 9,34 g; 5h.
- 5.\* D2 R4 a. Vienne 35892 (T 4104); 7,81 g; 1h.
- 6.\* D2 R5 a. Bruxelles Musées Royaux d'Art et d'Histoire (section Antiquité), coll. E. De Meester de Ravenstein n° 1374; 10,90 g; 12h.
- 7.\* D2 R6 a. Coll. RBW (ex Harmer Rooke 12/XII/1986, 475); 14,48 g; 9h.
8. D2 R7 a. Venise Museo Archeologico 3852; 11,32 g; 1h.
- 9.\* D2 R8 a. Londres BM 1947-6-6-1437 (Cameron); 15,30 g; 1h.
10. b. Londres BM 1947-6-6-1438 (Cameron); 11,65 g; 4h.
- 11.\* D3 R9 a. Vente Sternberg XXXV, 28–29/X/2000, 412 (ex J. Hirsch, coll. Consul Weber, XXIV, 10/V/1909, 777; Hess 20/V/1912, 337; R. Ratto 23/I/1924, 1414; Lugano, coll. Sydenham, fev. 1928, 444; Glendining, coll. Hall I, 21/VII/1950, 687; Spink Genève 15–16/II/1977, 210); 11,50 g; 12h.
- 12.\* D3 R10 a. Berlin I-B; 11,99 g; 12h.
- 13.\* D3 R11 a. Copenhague 1261; 12,28 g; 8h.
- 14.\* D4 R12 a. Vente Spink Genève 15–16/II/1977, 211; 11,89 g; 12h.
- 15.\* D4? R12 a. Milan 2280; 8,96 g; ?.

16. D4? R12? a. New York ANS 1944.100.7101; 16,35 g; 11h.

17. b. Turin S. A. 12068 (Fabretti 4726 bis); 12,55 g; ?.

B. Dupondius, bronze, 21–23 mm, 6,78 g (11 exs.). Axe: variable  
RSN 65, 1986, p. 84, B et RSN 69, 1990, p. 67 (*addenda*); RPC 1460; Sear  
292

Même description que I, B

Même description que I, B

1.\* D1 R1 a. Paris BnF 4600; 8,52 g; 9h.

2. D1? R1? a. Parme; ?; ?.

3.\* D1 R2 a. Vienne 35877; 6,17 g; 12h.

4.\* D2 R2 a. Paris BnF 10638; 4,12 g; 6h.

5.\* b. Tübingen coll. Hommel; 8,45 g; 12h.

6. c. Venise Museo Archeologico 3856; 5,66 g; 12h.

7.\* d. Vente Glendining, coll. Hall I, 21/VII/1950, 688, 7,58 g; ?

8.\* D2 R3 a. Berlin v. Rauch; 8,51 g; 1h.

9.\* D2 R4 a. Stock Hess (1980); 6,33 g; 3h.

10.\* D2 R5 a. Peus 382, 26/IV/2005, 371 (ex Helbing 63, coll. Prix, 29/  
IV/1931, 313; Ratto liste fev. 1966, 371; Finarte Numis-  
matica Asta 1004, 20/III/1997, 315); 6,50 g; 7h.

11. D2 R5? a. Coll. R. Weigel; 13,00 g; 4h.

12. D? R? a. Vatican 6392; 8,23 g; ?.

C. As, bronze au plomb, 17–20 mm, 5,20 g (11 exs.). Axe: variable  
RSN 65, 1986, p. 84, C; RPC 1461; Sear 293

Même description que I, C

Même description que I, C

1.\* D1 R1 a. Vente Leu 25, 23/IV/1980, 220; 4,90 g; 9h.

2.\* D1 R2 a. New Haven Yale University; 5,08 g; 3h.

- 3.\* D2 R3 a. Berlin I-B; 4,59 g; 3h.  
 4\* b. Coll. RBW; 5,86 g; 12h.  
 5.\* D3 R4 a. Stock Hess (1980); 4,51 g; 9h.  
 6. D3 R5 a. T. Cederlind BBS 143, 9/VII/2007, 190 (ex T. Cederlind BBS 141, 19/XII/2006, 196), 6.04 g  
 7.\* D4 R6 a. Classical Numismatic Group MBS 78, 14/V/2008, 1237 (ex coll. P.V.); 4,41 g; 12h.  
 8.\* D4 R7 a. Coll. RBW (ex vente A. Malloy MBS XX, 20/VII/1984, 327); 6,23 g; 4h.  
 9. b. Parme; ?; ?  
 10.\* c. Madrid coll. Sastre 24680; 4,51 g; 7h.  
 11. D? R7 a. H. Berk 131th BBS, 2/IV/2003, 480, 6,07 g; ?  
 12.\* D4 R8 a. Argenton-sur-Creuse; 5,07 g; 6h.

## FAUX

- F1. Sesterce, faux coulé, XVIII<sup>e</sup> siècle (?)  
 RSN 69, 1990, p. 69, F4  
 JTER•COS•DES•ITER•ET•TER[  
 L•ATRATINVS•AVGVR•PRAEF•CLASS•F•C  
 1.\* Riccio, pl. VI, 4 = Babelon 1, Antonia 71  
 F2. Dupondius, faux coulé, XVIII<sup>e</sup> siècle (?)  
 RSN 69, 1990, p. 69, F5  
 M•ANT•IMP•TER•COS•III•VIR•R•P•C  
 L•ATRATINVS•AVGVR•PRAEF•CLASS•F•C  
 1.\* Vienne 5186; 24,15 g; 6h = Babelon I, Antonia 72  
 F3. Dupondius, faux coulé, XVIII<sup>e</sup> siècle (?)  
 RSN 66, 1987, p. 111, F3 (attribué à Capito)  
 M•ANT IMP•TER•COS III•VIR•R•P•C  
 L•ATRATINVS•AVGVR•PRAEF•CLASS•F•C  
 1.\* Coll. privée; 36,56 g; 5h.  
 2. Coll. privée; ?; ?.

F4. Sesterce, faux frappé, début XX<sup>e</sup> siècle (?)  
 M • A N T • I M P • T E R • C O S • D E S • I T E R • I I I • V I R • R • P • C  
 L • A T R A T I N V S • A V G V R • C O S • D E S I G

1. \* Coll. privée; 21,92 g; 6h.

2. \* Coll. privée; 20,85 g; 7. Au revers, contremarque figurant une Victoire à g.

### COMMENTAIRE

Je reprends les principaux points de mon commentaire de 1990, en tentant de préciser, de nuancer, éventuellement de procéder à une *retractatio*.

#### 1. Sur Atratinus

Né en 73 avant J.-C., Atratinus était fils adoptif de L. Sempronius Atratinus, mais fils naturel de L. Calpurnius Bestia. Élu membre du collège des Augures en 40,<sup>6</sup> il présenta avec Messala devant le Sénat Hérode qu'Antoine et Octave avaient fait déclarer roi des Juifs.<sup>7</sup> Au traité de Misène, en juillet 39, il fut nommé *consul designatus* et partit sans doute en Grèce avec Antoine à l'automne 39. Il y resta probablement jusqu'en 36, en qualité de *legatus propraetore*. Une inscription trouvée à Hypata, en Thessalie lui donne le titre d' *antistratègos*.<sup>8</sup> Il devait être populaire en Achaïe, puisque la cité de Sparte émit un monnayage en son nom<sup>9</sup> et qu'une inscription de Patras le qualifie de patron et evergète de la cité.<sup>10</sup> En 36, il est probable qu'il commandait les vaisseaux promis à Octave par Antoine pour en finir avec Sextus Pompée, vaincu en septembre 36 à Nauoque. Le nom d'Atratinus figure sur deux séries siciliennes datables de l'automne 36, l'une d'Entella,<sup>11</sup> l'autre de Lilybée.<sup>12</sup>

6. Le monnayage qu'il fait frapper en 40/39 (*RPC* I, 2226 et *RPC Suppl.* I, S-2226A) mentionne ce titre.

7. Josèphe, *Bel. Iud.* I, 284, Paris, Les Belles Lettres (éd. A. Pelletier), 1975.

8. *IG* IX, 2, 39 = *ILS* 9461.

9. S. Grunauer-von Hoerschelmann, *Die Münzprägung der Lakedaïmonier*, *AMVGS* VII, Berlin, 1978, p. 39, p. 145, groupe XVI, série 9 et pl. 12; *RPC* I, 1101. Pour une révision de la liste des émissions telle qu'elle figure dans Grunauer, *op. cit.*, p. 37, voir vente LHS 96, coll. BCD, p. 224, n° 901-2.

10. L. Moretti, *Riv. di Filologia* 1980/4, p. 448-452 = *SEG* XXX, 1980, n° 433 = A. D. Rizakis, *Achaïe II. La cité de Patras : épigraphie et histoire, Meletèmata* 25, Athènes, 1998, p. 32 et p. 115-6, n° 33. L'inscription honore l'épouse d'Atratinus, Censorina, fille de L. Marcus Censorinus, gouverneur de Macédoine et d'Achaïe pour le compte d'Antoine en 42-40. Notons que la soeur d'Atratinus, Sempronia, la femme de L. Gellius Poplicola, est honorée par trois inscriptions : Rizakis, *op. cit.*, p. 116, n. 2.

11. Grant, M., *From Imperium to Auctoritas (FITA)*, Cambridge, 1946, p. 392-3; R. Calciati, *Corpus Nummorum Siculorum* I, Milan, 1983, p. 321-2, n° 15-19; *RPC* I, 653-4.

12. *FITA*, p. 392-3; R. Calciati, *op. cit.*, p. 263-4, n° 15; *RPC* I, 655.

En 34, Atratinus fut *consul suffectus* avec L. Scribonius Libo. On perd ensuite sa trace. Après Actium, il a obtenu son pardon d'Octave, car on le retrouve proconsul d'Afrique en 22/21.<sup>13</sup> Il obtint dans cette charge, pour des actions inconnues,<sup>14</sup> le triomphe qu'il célébra à Rome en octobre 21.<sup>15</sup> Sa mort se situe en 7 avant J.-C. et il fut enterré dans son mausolée à Gaeta.<sup>16</sup>

## 2. Où a été frappé le monnayage d'Atratinus?

Aucune nouvelle provenance ne m'est connue depuis 1990. Mais les monnaies d'Atratinus se rencontrent dans le Péloponnèse, en Crète et sur le marché athénien. Nul doute dans mon esprit que ces monnaies ont été émises en Grèce. En raison de leurs caractéristiques techniques (cavité centrale invitant à choisir un atelier actif dans le Péloponnèse), il m'avait semblé naturel de proposer l'atelier de Corinthe qui fut une des places stratégiques d'Antoine et dont l'un des ports peut avoir accueilli une de ses escadres méditerranéennes. Mais les suggestions de J. Kroll<sup>17</sup> me semblent aujourd'hui emporter l'adhésion. Il insiste sur certaines similarités entre le monnayage de Lacédémone et celui d'Atratinus et sur l'importance du port laconien de Gytheion qui fut en 74 la base navale de M. Antonius Creticus, le père d'Antoine, dans sa lutte pour éradiquer la piraterie qui sévissait en Méditerranée. L'argument des provenances en faveur du sud du Péloponnèse est lui aussi fort, puisque le flux de monnaies vers la Crète passait par Gytheion. L'hypothèse développée par Martini<sup>18</sup> est une pure construction intellectuelle : l'attribution du mon-

13. Un aussi long délai entre son consulat a été expliqué par le fait qu'il avait été des partisans d'Antoine et que c'est uniquement le manque de consulaires qui avait obligé Auguste à admettre à la *sortitio* des provinces publiques les anciens consulaires partisans d'Antoine, quand ils vivaient encore. Pour une explication juridique, voir F. Hurlet, *Le proconsul et le prince d'Auguste à Dioclétien*, Bordeaux, 2006, p. 46–48.

14. Il réprima sans doute des troubles aux confins de la Maurétanie et de la Numidie, mais les historiens romains ont peu commenté ces conflits endémiques : M. Coltelloni-Trannoy, *Le royaume de Maurétanie sous Juba II et Ptolémée. Etudes d'antiquités africaines*, Paris, 1997, p. 48, 95–96.

15. Cf. les *Fasti triumphales Capitolini* et les *Fasti triumphales Barberiniani* (CIL I<sup>2</sup>, p. 50, 77 = *Inscr. It.* XIII, 1, p. 571). Voir les remarques de F. Hurlet, "Les auspices d'Octavien/Auguste," *Cahiers Glotz* XII, 2001, p. 167–8 et n. 48 : Atratinus gouverne sa province en qualité de *privatus cum imperio*, à une époque où un tel statut ne remet pas en cause la validité des auspices que les généraux étaient alors autorisés à prendre en campagne. Le monopole auspicial au profit de la famille impériale date de 19 avant J.-C.

16. R. Martini, "Lucius Sempronius Atratinus magistrato repubblicano, politico antoniano, uomo del cambiamento," *Circolo Numismatico «Mario Rasile». Quaderno di Studi XXVII*, Maggio/Guigno 1998, p. 43–68 (plus part. p. 46–49 et n. 18).

17. J. H. Kroll, "Traditionalism vs Romanization in bronze coinages of Greece, 42–31 BC," *Topoi* 7, 1997, p. 123–136 (plus part. p. 128–9).

18. R. Martini, *loc. cit.* n.16, p. 59–60.



nayage d'Atratinus à l'île de Zante repose sur la supposition, qui n'est étayée par aucun texte, qu'Atratinus aurait pris la place de Sosius à Zante quand ce dernier partit en Syrie en 38 pour remplacer P. Ventidius à la tête de la province de Syrie et qu'il serait resté dans cette île jusqu'au retour de Sosius qui avait capturé Jérusalem en juillet 37. S'il est vrai que les monnaies de Zante de Sosius ont également une cavité centrale,<sup>19</sup> le problème des provenances est évacué par Martini sous prétexte que le caractère officiel de ces frappes « rende automaticamente le monete sovra-territoriali... In questa luce l'equazione « ritrovamento : area di produzione » viene a perdere grand parte della propria aderenza critica ». <sup>20</sup> C'est ainsi qu'il attribue le monnayage de Bibulus à Athènes<sup>21</sup> et celui de Capito à Ephèse !

### 3. Datation

La datation du monnayage d'Atratinus (et de celui de Bibulus et de Capito) repose sur la datation de la troisième salutation impériale d'Antoine. Depuis 1990, personne, à ma connaissance, n'a remis en question la date de 38, ce qui induit pour les trois magistrats une période de frappe allant de fin 38 à 37. Atratinus et Capito auraient pu toutefois faire frapper leurs séries légères après Nauoque. R. Martini s'en tient<sup>22</sup> il est vrai aux dates qu'il proposait en 1985 (fin 39–38), sans vraiment discuter mes arguments. Mais je me range désormais à son avis sur un point :<sup>23</sup> il serait étonnant qu'Atratinus et Capito aient continué, en 36/35, à faire frapper des monnaies figurant le portrait d'Octavie, même dans des territoires qui ne dépendaient pas de Cléopâtre. Je date donc désormais le monnayage d'Atratinus, séries lourde et légère, de 38/37.

### 4. Dénominations

Le système mis en place par les trois officiers d'Antoine est complexe : je n'y reviens pas. Il se compose, pour les séries lourdes, de 6 dénominations—sesterce, tressis, dupondius, as, semis et quadrans—et, pour les séries légères (uniquement frappées par Atratinus et Capito), de trois dénominations,—sesterce, dupondius et as. Car il y a bien séries lourde et légère et s'obstiner à le nier<sup>24</sup> en affirmant simplement que

19. *RPC I*, 1290–1293.

20. R. Martini, *loc. cit.*, p. 61.

21. Dans la publication des fouilles de Hama en Syrie (*Hama. Fouilles et recherches 1931–1938*. III 3. *The Graeco-Roman objects of clay, the coins and the Necropolis*, Copenhagen, 1986), R. Thomsen publie, p. 60, parmi les monnaies de Phénicie, sous la rubrique « Place unidentified » une monnaie d'Antoine qu'il décrit ainsi « Obv. Connected busts of Antonius and woman to the right ; countermark palm branch and E ». Voilà sans nul doute un nouvel exemplaire d'un as de Bibulus qui m'avait échappé.

22. *Loc. cit.* p. 54.

23. *Loc. cit.* p. 60.

24. R. Martini, *loc. cit.* p. 58–59.

ces pièces étaient frappées « al marco » et que l'on n'apportait pas un grand soin à leur production car elles étaient en bronze revient à nier l'étude même des coins. Et il ne faut pas me faire dire ce que je n'ai jamais écrit, à savoir que les séries lourdes sont en cuivre presque pur et les séries légères en bronze, impliquant deux circuits de circulation. Les analyses publiées en 1990<sup>25</sup> montraient bien que, quelle que soit la série, ces pièces étaient fabriquées dans un bronze allié de plomb.<sup>26</sup>

Mais revenons pour finir à quelques constatations sérieuses : Atratinus est honoré à Sparte au cours de l'émission XVI.<sup>27</sup> C'est avec l'émission XVIII que Lacédémone adopte un nouveau système que Grunauer met au compte de l'influence du monnayage des « préfets de la flotte ».<sup>28</sup> Le poids moyen des exemplaires des émissions XVIII à XXII, toutes frappées avant le règne d'Auguste, est le suivant :

XVIII	10.48 g (24 exs.) ;
XIX	11.31 g (96 exs.) ;
XX	27.95 g (14 exs.) ;
XXI	11.65 g (35 exs.) ;
XXII	11.75 g (23 exs.) ;

Il est difficile d'affirmer que les exemplaires de l'émission XVIII représentent une dénomination différente de celle frappée au cours des émissions XIX, XXI et XXII. S. Grunauer optait pour les équivalences suivantes:<sup>29</sup>

Sesterce	XX
Dupondius	XIX, série 1
As	XVIII, XIX, séries 2-4, XXI, XXII

Elle dissociait dans l'émission XIX la série 1 des 3 autres séries : le poids moyen des exemplaires de la série 1 est effectivement plus lourd (12,69 g, 9 exs.) que celui des séries 2 à 4 (11,17 g, 87 exs.). Mais il est peu vraisemblable de séparer la série 1 des

25. Amandry 1990, p. 95.

26. R. Martini, *loc. cit.* p. 58 : « gli autori numismatici...avevano ipotizzato una duplice circolazione delle monete di Antonius. L'ipotesi è ripresa anche dall'Amandry, pur se deve accettare il dato di fatto que le supposte differenze metalliche non esistono ». Ce texte est intéressant, car à aucun moment Martini ne renvoie à un article antérieur. Qui sont les « autori numismatici » dont il parle? où aurais-je pu écrire les sottises qu'il m'attribue?

27. Grunauer-von Hoerschelmann, *op. cit.*, n. 9, p. 140-148, série 9. Corriger Kroll, *loc. cit.*, qui parle de l'émission 14, p. 128. Les deux exemplaires d'Atratinus qui portent les noms ΦΙΛΩ et ΠΡΑ CΩ, qui apparaissent au cours de l'émission XVII (séries 14 et 16 : Grunauer-von Hoerschelmann, *op. cit.*, p. 155) obligera peut-être à intervertir émissions 16 et 17.

28. Grunauer-von Hoerschelmann, *op. cit.*, p. 51-52, approuvé par J. Kroll, *loc. cit.*, p. 128.

29. Grunauer-von Hoerschelmann, *op. cit.*, p. 51.

séries suivantes, de la 2 en tout cas, de mêmes types de droit et de revers. J. Kroll,<sup>30</sup> suivi par A. Walker dans son catalogue de la collection BCD, optent pour la valeur nominale d'un dupondius pour les exemplaires des émissions XVIII, XIX, XXI et XXII. Le poids moyen de 11,32 g (178 exs.) n'est guère éloigné en tout cas du poids moyen des dupondii lourds d'Atratinus (11,81 g, 19 exs.). La question est évidemment de comprendre pourquoi le monnayage de Lacédémone aurait été romanisé si tôt. J. Kroll insiste sur l'importance stratégique de la Laconie et de son port, Gytheion, pour Antoine. L'utilisation par les marins des escadres de deniers, mais surtout de bronzes « romains » aurait conduit les Lacédémoniens à adapter leur monnayage à ces dénominations.

Plus au nord, sur l'Adriatique, la cité d'Apollonia semble en avoir fait de même et aligné le système apolloniate sur le système romain.<sup>31</sup> Les données relevées par S. Gjongecaj et O. Picard sont les suivantes:

	Apollonia		Atratinus	
	Poids moyen	rapport	Poids moyen	valeur
Artémis	17 g	4	16,69 g	tressis
Dionysos	11,97 g	3	11,81 g	dupondius
Apollon/obélisque	8,3 g	2	9,68 g	as
Apollon/cithare	4,43 g	1	4,36 g	semis

Comme à Lacédémone, la cité a adapté son iconographie traditionnelle de bronze aux nouvelles espèces, en leur attribuant le poids de dénominations romaines. Dyrrachion semble en avoir fait de même.<sup>32</sup> Ainsi le phénomène qui avait été entrevu en Maurétanie<sup>33</sup> se produit en Grèce : l'intégration progressive dans la mouvance romaine, avant le règne d'Auguste, de monnayages de cités grecques. Ce phénomène survient, il est vrai, dans des provinces où ont été installées très tôt des colonies romaines.<sup>34</sup>

30. J. Kroll, *loc. cit.*, p. 128.

31. S. Gjongecaj et O. Picard, Le trésor de Dimalla 1973 et le passage du monnayage hellénistique au monnayage impérial à Apollonia d'Illyrie, *Bulletin de Correspondance Hellénique* CXXII, 2 (1998), p. 511-527 (plus part. p. 520-522).

32. S. Gjongecaj, "Le trésor de Lleshan (Elbasan)," *Revue Numismatique* 163, 2007, p. 101-140 (plus part. p. 111-112).

33. M. Amandry, "Transformations des villes indigènes en villes romaines en Maurétanie : apport de la numismatique," *ANÉJOS AEsPA* XXII, 2000, p. 53-58.

34. M. Amandry, "Les colonies romaines ont-elle été le vecteur de l'introduction des dénominations romaines au pourtour de la Méditerranée?," *Topoi* 7, 1997, p. 137-148.

## The Aureus Under Trajan: The Metrological Evidence

BERNHARD E. WOYTEK\*

This article provides an in-depth examination of the metrological behaviour of Trajan's aureus issues (AD 98–117) and is based on the data of about 1800 coins, assembled in the course of a wider program of research on the coinage of Trajan's reign.

Trajan reduced the aureus weight from the standard of  $1/43$  pound, which had been used for the later issues of Domitian and under Nerva, to the Neronian standard of  $1/45$  pound soon after his accession, in AD 98/99, and this lower standard was adhered to throughout his reign. The reduction is to be interpreted in the context of Trajan's lowering of the silver content of the denarius alloy to c. 80 percent in AD 100.

Up to now, the metrology of Trajan's gold coinage (AD 98–117) has not received comprehensive treatment. This deficiency was recently pointed out by Cathy E. King: when discussing the problem of the weight standard of Trajan's half aureus in her long-awaited monograph on Roman *quinarii*, she did not have reliable figures for its double piece at hand (King 2007, 122). This lack of adequate metrological information on the Trajanic aureus is all the more unsatisfactory because we know for sure that there was a considerable reduction in the weight standard of the gold coinage under Trajan. The precise dating of the lowering, however, as well as

\*Numismatic Commission, Austrian Academy of Sciences, Postgasse 7/1/1, 1010 Vienna, Austria. E-mail: [bernhard.woytek@oeaw.ac.at](mailto:bernhard.woytek@oeaw.ac.at). Currently fellow of APART [Austrian Program for Advanced Research and Technology] of the Austrian Academy of Sciences, Vienna. Thanks are due to Richard B. Witschonke for painstakingly reviewing my English and to the anonymous referees of A/JN for valuable comments and suggestions.

its extent and whether it happened gradually or suddenly have been debated since the mid-nineteenth century.

The purpose of the present article is to supply much needed metrological data and to discuss briefly their implications in the context of the monetary economy of Trajan's reign. Metallurgical analyses of silver *denarii* recently conducted as part of the author's research on Trajan's coinage have brought about a fundamental change in the modern conception of this emperor's monetary reforms. As has been demonstrated (Woytek et al. 2007), the Roman mint had already reduced the silver content of the denarius alloy from slightly below c. 90 percent to c. 80 percent in the issues of AD 100. Thus, the reduction in fineness was much more marked and took place some years earlier than had been previously thought.<sup>1</sup> Therefore, it seems necessary to check how the metrology of Trajan's aureus fits with the evidence of his silver coinage.

The weight statistics presented in this paper are based on the material collected by the author since 2001, in the course of the preparation of a new corpus of the imperial coinage of Trajan, to be published shortly in the Viennese series *Moneta Imperii Romani* by the Austrian Academy of Sciences. For this book, information on more than forty thousand Trajanic coins has been gathered from the most important museum collections of the world—both published and unpublished—as well as from publications of the coin trade, auction catalogues, and dealers' lists. Among the technical data thus assembled, the weights of about 1,800 Trajanic *aurei* have been recorded, representing a most reliable sample size for our investigations.

The only Roman emperor of the late first century whose gold coinage has been studied in greater detail from the metrological point of view is Domitian (AD 81–96). Ian Carradice has calculated average weights for Domitianic *aurei* from the third and final period of this ruler's precious metal coinage, stretching from AD 85 to 96. One hundred and twenty-five *aurei* of this period in the Zemun hoard, discovered near Belgrade in 1875,<sup>2</sup> averaged 7.63 g (on contemporary weighings), whereas ninety-six pieces of the same period preserved in major museums' collections were found to average a little less, viz. 7.54 g (Carradice 1983, 50–51). This

1. According to the reconstruction of Walker (1977, 46, 55–57), which held sway for about three decades, Trajan reformed the denarius coinage only in AD 107, reducing the silver content just slightly, from c. 93 percent to between 88 and 90 percent. This hypothesis is based on fallacious figures obtained during analyses of Trajanic *denarii* with an entirely inappropriate analytical technique. See Butcher and Ponting (1998), 312, 322; Woytek et al. (2007).

2. See Ljubić (1876). This hoard, of which originally 230 *aurei* were acquired by the then National Museum Zagreb, is now partly dispersed, because duplicates were sold off in the late nineteenth century; the remaining eighty-five coins are today kept in the numismatic collection of the Archaeological Museum of Zagreb. I am extremely grateful to Ivan Mirnik for providing information on the hoard.

is not surprising, since the *aurei* in public collections come from various sources and inevitably have suffered different degrees of wear; the Zemun pieces, on the other hand, were part of a hoard closing early in Trajan's rule (AD 99) and are in excellent condition, because their circulating life was short. Carradice (1983, 51), therefore, regarded them as the "best guide to the weights of gold coins" in Domitian's reign.<sup>3</sup>

The aureus standard used in the final period of Domitian's gold coinage continued into the reign of his successor Nerva (AD 96–98), as can be seen from the frequency table below (Fig. 1). It shows the weight distribution of eighty-five *aurei* of Nerva; the data were assembled from the published collections of London, Paris, and Glasgow (Mattingly 1936; Giard 1998; Robertson 1962), as well as from specimens in trade recorded in the central card file (Numismatische Zentralkartei—NZK) at the Institute for Numismatics of Vienna University. It is the present writer's opinion that metrological analyses should preferably be carried out using frequency tables.<sup>4</sup> The advantages of this tool were first described

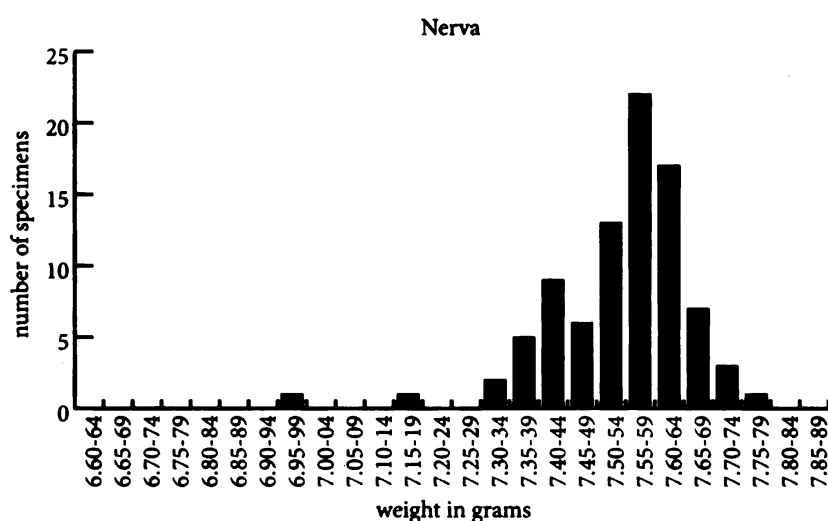


Figure 1. Weights of eighty-five *aurei* of Nerva

3. It must be stressed, however, that the weights of the Zemun coins provided by Ljubić (1876) should be used with caution; comparison between the weights reported in his publication for some of the pieces that are still in Zagreb with these coins' weights as determined by modern balances shows that Ljubić's figures are systematically too high, by 0.01–0.03 g. Notwithstanding this, Carradice's contention is doubtless valid: a "corrected" average weight of the Zemun pieces would still be significantly higher than the average of the weights of Domitianic *aurei* from other sources.

4. It is still a point of debate whether mean weights (as calculated by Carradice), median, or

systematically by Hill (1924). In fact, apart from establishing the probable target weights, frequency tables give an impression of the metrological structure of ancient coin issues, and this information can be crucial.

The greatest concentration of aureus weights of Nerva falls between 7.55 and 7.59 g, although the range between 7.60 and 7.64 g is also well represented. It is probably here where the target weight is to be sought, and this target weight is in accordance with the data derived from the weights of Domitian's *aurei* in the Zemun gold hoard by Carradice (mean weight 7.63 g). As to determining the standard used by the Roman mint for the *aurei* in the last decade or so of Domitian's reign and under Nerva, the classic question of the weight of the Roman pound (*libra*) arises in as much as calculations range from 322.56 to 327.45 g.<sup>5</sup> It is most difficult to find the correct equation, so that it has even been claimed that "an absolute figure seems unobtainable" (King 2007, 12). Recent research suggests that a value close to the highest of the cited figures (326.7 g) may be the correct one (Hahn 2005, 279–282; following Elsen 2004, 1–11). I have calculated a *libra* as c. 327 g, which leads to the calculation of a standard of forty-three to the pound for the *aurei* of Domitian and Nerva (theoretically c. 7.60 g, on this reckoning). Therefore, Domitian chose a standard considerably higher than Nero's reformed weight standard for *aurei*, which had been forty-five to the pound according to Pliny (*Naturalis Historia* 33.47), but much lower than the aureus standard of forty to the pound instituted by Julius Caesar, who introduced a regular Roman gold coinage in 46 BC.<sup>6</sup>

The *dies imperii* of Trajan was January 28, AD 98 (Hanslik 1965, 1045). When he ascended the throne, Trajan was not in Rome but rather in Germania Inferior, from where he went on a prolonged journey along the northern borders of the empire, returning to Rome only in the autumn of AD 99. Despite his absence, coinage was produced in Rome during this period. The first issue struck in the name of the new emperor by the Roman mint bears the legends IMP NERVA CAES TRAIAN AVG GERM P M (obv.) / TR P COS II P P (rev.), as was recognized by Strack (1931, 21–22).<sup>7</sup> The peculiar sequence of names, "Imperator Nerva Caesar Traianus," suggests that the administration at Rome, without consulting the new ruler, devised the titulature. Indeed, this was put right—perhaps on

mode weights or frequency tables ought to be used in order to determine the "true" target weights of ancient coin issues. See, most recently, Butcher and Ponting (2005a, 110–111).

5. For the lower figure (calculated by L. Naville), see Duncan-Jones (1994, 213–215), finally opting for 322.8 g; for Boeckh's higher figure (advocated also by Mommsen), see Hulstsch (1882, 155–161).

6. This standard is mentioned by Pliny, too (*Naturalis Historia* 33.47); for Caesar's aureus standard, see Woytek (2003, 227, 264, 267; 2004, 344).

7. See also Wolters (1992, 284–289) on this point. Strack 1931, nos. 1–4 and 300–303.

Trajan's own order<sup>8</sup>—in the immediately following group of coins. The first issue was a very small one, struck probably only in the first two weeks or so of Trajan's rule (Wolters 1992, 288, n. 14). *Aurei* of this issue are excessively rare, with just five specimens in all being known to me. Weights are available for three of them: 7.31, 7.55, and 7.59 g, respectively.<sup>9</sup> *Aurei* of the Roman Principate were not struck *al pezzo*, but *al marco*, so that individual weights could differ substantially. This explains the rather low weight of the piece in the British Museum, which does not affect the metrological interpretation of the issue as such: the first Trajanic *aurei* were certainly produced on the same standard that had been in use in the final phase of Domitian's reign and under Nerva, viz., forty-three to the pound.

The first substantial issue of Trajanic precious metal bears the corrected legends IMP CAES NERVA TRAIAN AVG GERM (obv.) / PONT MAX TR POT COS II (rev.) (Strack 1931, nos. 10–20). The absence of the title *pater patriae* (P P) is conspicuous, as compared to the issue at the very beginning of Trajan's reign. In fact, Pliny the Younger states in the *Panegyricus* (21.1–2) that Trajan repeatedly refused this honorific in the initial phase of his rule. Most likely, the administration of the Roman mint had automatically included the title in the legends of the first issue, because Trajan was expected to follow Nerva's example in accepting it at once (Strack 1931, 20, n. 46). The emperor, however, preferred to demonstrate his modesty and immediately ordered the removal of the "P P" from his titulature. In military diplomas dated February 20, AD 98, the title has already been dropped (CIL XVI, 42; Haalebos 1999, 208–209). After some months, the emperor finally yielded to the senate's insistence. The precise date of Trajan's assumption of the title is uncertain, but it has been inferred from another passage of the *Panegyricus* (57.1ff., esp. 5) that he assumed it shortly (?) before the consular election *comitia* for AD 99, perhaps before mid-October of 98 (Dierauer 1868, 42, n. 2; Strack 1931, 20–21).<sup>10</sup> In this passage, Pliny mentions Trajan's refusal of the consulate for AD 99, adding praises of the emperor's modesty, although he had already been *Augustus et Caesar et pater patriae* at that time. The PONT MAX TR POT COS II issue lacking this title was therefore probably produced between February and the late autumn of AD 98, at the latest.

8. Wolters (1992, 288–289, n. 14), *contra* Seelentag (2004, 58–59). According to him, the change was ordered "von den stadtrömischen Vertrauten des neuen Herrschers."

9. The pieces are (1) London, Mattingly 1936 (= BMC) Trajan 48; (2) Rome, Medagliere Capitolino, inv. no. 3530 (ex Campana coll.); and (3) Mazzini 1957, no. 591 (weight given as 7.50 g) = A. Hess AG, auction sale 5/4/1955 ("Goldmünzen und Goldmedaillen"), no. 85 (weight given as 7.60 g) = Numismatica Ars Classica AG auction sale 23 (19/3/2002), no. 1532 (weight given as 7.59 g).

10. On the dating of the consular elections/designations under the empire, see Mommsen (1887, 588), in the autumn "im October," from Augustus on; and Strack (1931, 18, n. 40): "etwa Mitte Oktober."



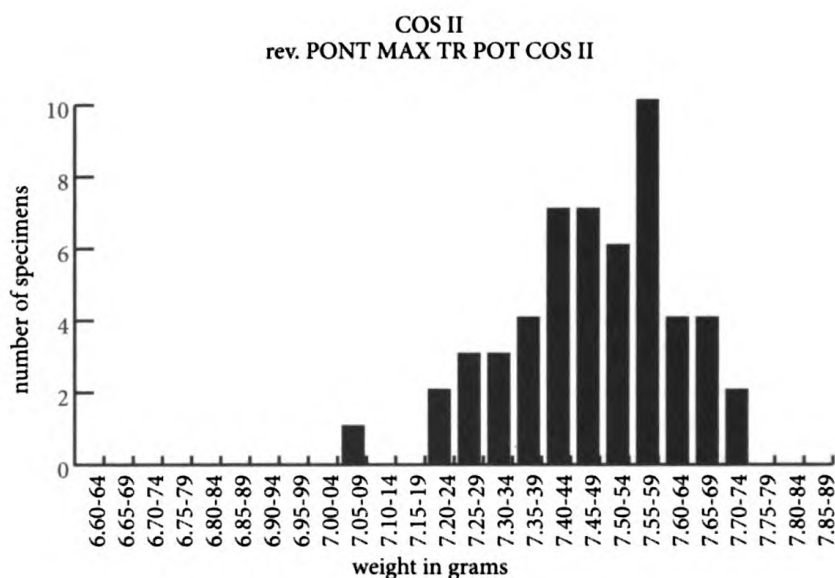


Figure 2. Weights of fifty-three *aurei* of Trajan, COS II (c. February-October?, AD 98). Mean weight: 7.48 g.

As can be seen (Fig. 2), a frequency table of aureus weights of this issue displays a distinct peak in the range from 7.55 to 7.59 g, just like the frequency table of *aurei* from Nerva's reign (Fig. 1). It seems clear that in the first nine months of Trajan's reign the weight standard of the gold coinage was not tampered with; it remained at forty-three to the pound.

The frequency table of aureus weights of the following issue, which again included the title P(ater) P(atriae) and is to be dated in the period between c. mid-October 98 and the end of 99 (Strack 1931, nos. 21–28),<sup>11</sup> presents us with a different picture (Fig. 3). The metrological structure of this group differs fundamentally from the issues discussed up to now, because it covers a broad range of weights. Whereas nearly all the weights recorded for the *aurei* of Nerva and Trajan's first substantial issue cluster within 0.5 g, the present group covers nearly 1.0 g. There is no well-defined point of highest frequency for P M TR P COS II P P *aurei*, just an insignificant peak at 7.25–7.29 g within a concentration of weights in the broader range between 7.25 and 7.39 g. The table reveals a marked reduction of the weight standard.

11. Trajan became consul for the third time on January 1, AD 100.

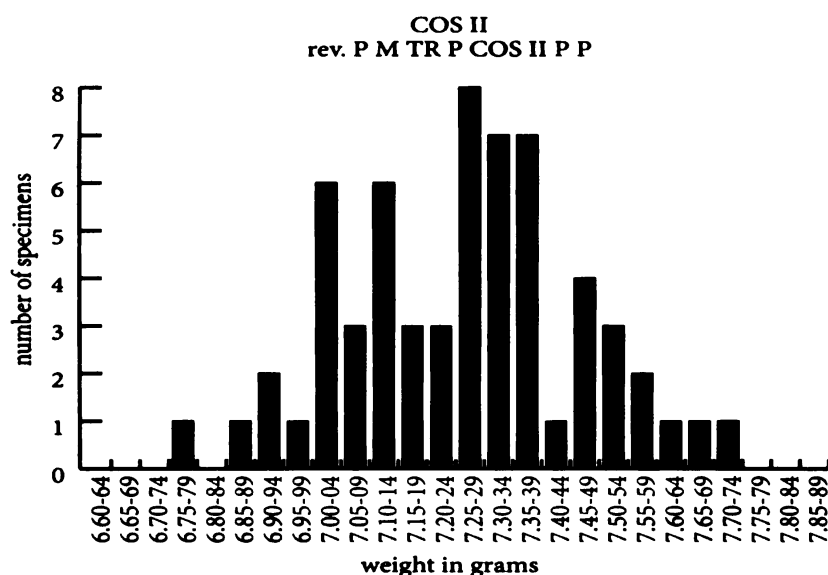


Figure 3. Weights of sixty-one *aurei* of Trajan, COS II (c. October? AD 98–AD 99). Mean weight: 7.26 g.

Based on the weight of the *libra* adopted here, a lowering of the standard to 1/44 pound would have resulted in a target weight of c. 7.43 g, whereas a standard of 1/45 is equivalent to a theoretical target weight of c. 7.27 g. In our sample, the weight range between 7.40 and 7.44 g is represented by just a single specimen, while the peak—however insignificant it may be—is at 7.25–7.29 g, and twenty-six of the sixty-one weights recorded for this group are below 7.25 g. It seems very likely that the majority of the P M TR P COS II P P *aurei* were struck on the Neronian standard of forty-five to the pound. A glance at Figure 3 shows that a considerable number of specimens in the central range of weights (7.25–7.39 g) exceed this target weight, but this does not necessarily militate against our hypothesis.<sup>12</sup>

This issue could have represented a transitory phase, because not all of the *aurei* were struck on flans produced according to the new, lower standard. The broad range of weights covered by the issue and the unusual proportion of heavier

12. The presence of a considerable number of “overweight” *aurei* provisionally assigned to the standard of 1/45 of a pound here seems explicable on our theory, since a new standard always tends to set in with rather heavy coins and is bound to decline later on. What is more, some of these coins might in fact be struck on “light” flans belonging to a higher standard. See below.

pieces can be explained by the use of (at least) two different standards by the mint of Rome in the months possibly between October 98 and the end of 99. The high weights (7.45–7.74 g) recorded for P M TR P COS II P P *aurei* (Fig. 3) are comparable to the weights of the first Trajanic issue and of Nerva's *aurei* struck on the standard of 1/43 pound. There are two possibilities: either the reduction of the standard was decreed before production of the new issue began and the mint, in the early stages of the coining process, merely used up heavier flans that had already been prepared, or the reduction was instituted while the minting of the group was already under way. Since using heavy flans at a time when the standard had already been lowered would have meant a considerable loss of revenue, the first possibility seems less likely. Probably the new target weight was introduced as the production of the issue was already in progress. The following *aurei* of this group with a weight of more than 7.50 g have been recorded:

Weight	Reverse Type	References	Location / Source
7.52 g	Germania seated l.	Strack 23; RIC 5	Utrecht, Schürmann coll., inv. no. 14, ex Ciani–Vinchon auction sale 6/5/1955, no. 328 (weight given as 7.53 g here)
7.52 g	Germania seated l.	Strack 23; RIC 5	Hess–Leu auction sale 27/3/1956, no. 381, ex Jameson coll.: Jameson 1980, no. 89 (weight given as 7.54 g here)
7.52 g	Germania seated l.	Strack 23; RIC 5	Paris, inv. no. Rothschild 244
7.56 g	Fortuna standing l.	Strack 22; RIC 4	Vienna, inv. no. 7869
7.57 g	Roma seated l.	Strack 25; RIC 8	Classical Numismatic Group auction sale 46 (24/6/1998), no. 1232, ex Dorotheum auction sale 975 (13/6/1955: Zeno coll., part 1), no. 597
7.62 g	Fortuna standing l.	Strack 22; RIC 4	cast in Madrid: Alfaro Asins 1993, Apendice, no. 155
7.68 g	Germania seated l.	Strack 23; RIC 5	Berlin, without inv. no.
7.73 g	Germania seated l.	Strack 23; RIC 5	Utrecht, general coll., ex J. Hirsch auction sale 24 (10/5/1909: Consul Weber part 2), no. 1331 (weight given as 7.71 g here) <sup>13</sup>

Table 1. *Aurei* of Trajan, rev. P M TR P COS II P P: weight > 7.50 g.

13. This piece is probably to be identified with an aureus from the Zemun hoard, which is no longer at Zagreb. See Ljubić (1876, 28, no. 226), where the weight is given as 7.75g.

Table 1 needs some explanatory comments. Fortuna, Germania, and Roma are the only reverse types that are known for *aurei* of this issue; they had already been used in the PONT MAX TR POT COS II group. In the P M TR P COS II P P issue, they are all represented both among the heavy and the light pieces, with lighter pieces outnumbering the heavy ones by far. This shows that the reduction occurred early in the production of the issue. While the typological distribution of the coins does not give us a clue to the precise dating of the reduction of the standard, it indicates that *aurei* of all three types in this group were probably not struck sequentially, but more or less simultaneously.<sup>14</sup> For all the aureus types, die links between very heavy specimens listed above and lighter specimens have been observed.<sup>15</sup> That there was no typological differentiation between pre- and postreform *aurei* is in accordance with our expectations.

Trajan entered Rome for the first time as emperor probably in the autumn of AD 99 (Hanslik 1965, 1050–1051). Pliny the Younger records his presence in the capital at the *comitia* for the year 100, or about mid-October 99 (*Panegyricus* 63.1ff., 64.1ff.). He was elected consul for the third time at these elections, and entered office on January 1, AD 100 (Hanslik 1965, 1053–1054).<sup>16</sup>

14. It should, however, be noted that *aurei* with Germania are overrepresented among the heavyweight coins listed above. In general, pieces with this reverse are decidedly less common in the P M TR P COS II P P issue than Fortuna *aurei* and were probably produced on the same scale as *aurei* with Roma reverses, according to the figures available to me. In my files, there are thirty-nine Fortuna *aurei* of this issue and fifteen pieces each of the Germania and Roma types; unfortunately, for some of them no weights are available.

15. The Germania aureus in Berlin (7.68 g) was struck from the same pair of dies as BMC 34 (7.39 g), Paris, inv. no. AF 526 (7.32 g), and Giessener Münzhandlung auction sale 101 (6/3/2000), no. 782 (7.00 g). The Roma aureus from the Zeno coll. (7.57 g) was struck from the same obverse die as the Germania aureus ANS 1958.214.8 (7.42 g). The Fortuna aureus in Vienna (7.56 g) was struck from the same pair of dies as a Fortuna aureus in Glasgow, Robertson (1971), Trajan no. 14 (7.36 g).

16. As for Trajan's designation for the third consulship, Ehrhardt and Weiss (1995, 326) have put forward the hypothesis that it occurred only after the period November 6–12, 99, since an inscription with a letter of Trajan to the city of Delphi dating from this timespan styles the emperor simply COS II, without mentioning the designation. Though this interpretation is widely accepted today, the designation may simply have been left out in the inscription. Such an omission is perfectly plausible, as can be demonstrated by a numismatic analogy from Trajan's rule: the emperor's designation for the fifth consulship was not indicated on all the imperial issues produced in Rome after the consular election, but only on the bronzes, while the contemporary *aurei* and *denarii* (including the new cognomen DACICVS, which he assumed after December 10, 102) style Trajan only COS IIII (Strack 1931, nos. 55–60).

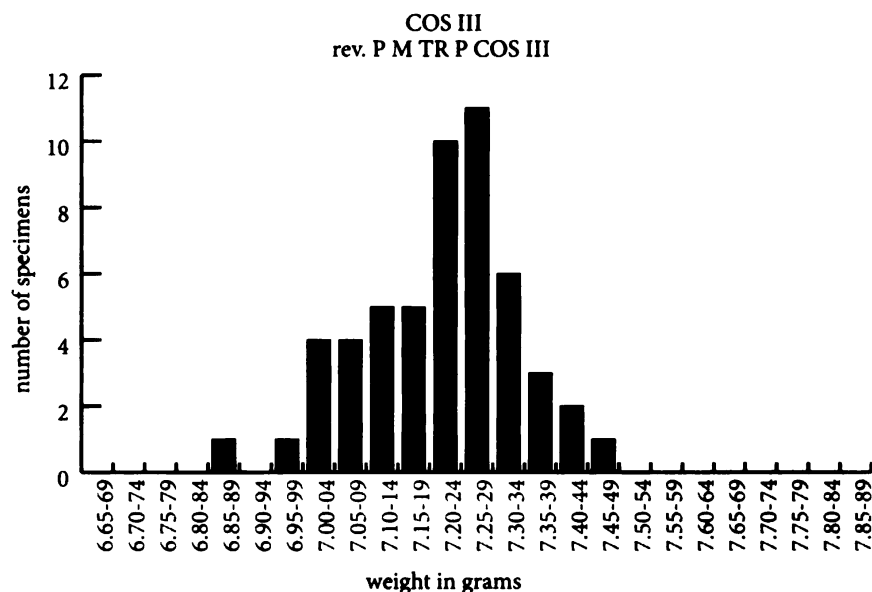


Figure 4. Weights of fifty-three *aurei* of Trajan, COS III (AD 100).  
Mean weight: 7.21 g.

The *aurei* produced by the Roman mint in AD 100 were struck according to the Neronian standard of forty-five to the pound (target weight: 7.27 g), as can be seen in Figure 4. The diagram exhibits a "classic" distribution, with the greatest concentration of weights to be observed in the range between 7.25 and 7.29 g; the next higher weight group is markedly less well represented. In this issue, the weight range covered by the recorded specimens is again just about 0.5 g, far smaller than that in the preceding P M TR P COS II P P group. This third issue, comparable in the number of samples to the first two issues, was struck on a single weight standard.

This standard was employed in the issues of Trajan's fourth consulate, too (Fig. 5), which covered two years. The sample size for these coins is considerably larger than that of the preceding groups. The weight peak in the frequency table falls somewhat lower than that of the COS III issue, in the range of 7.20–7.24 g, but the next higher class is also well documented. Clearly the same target weight (7.27 g on our reckoning) as in the preceding issue was intended, but it was achieved with less accuracy in this group.

The issues of the second, third, and fourth consulates cover the first five years of Trajan's reign (AD 98–102) and are generally taken to constitute the first of the three major phases of his coinage. Before examining the development of the Trajanic aureus during the emperor's fifth and sixth consulates (AD 103–111 and 112–117, respectively), we should compare the results obtained so far with previous research on the topic.

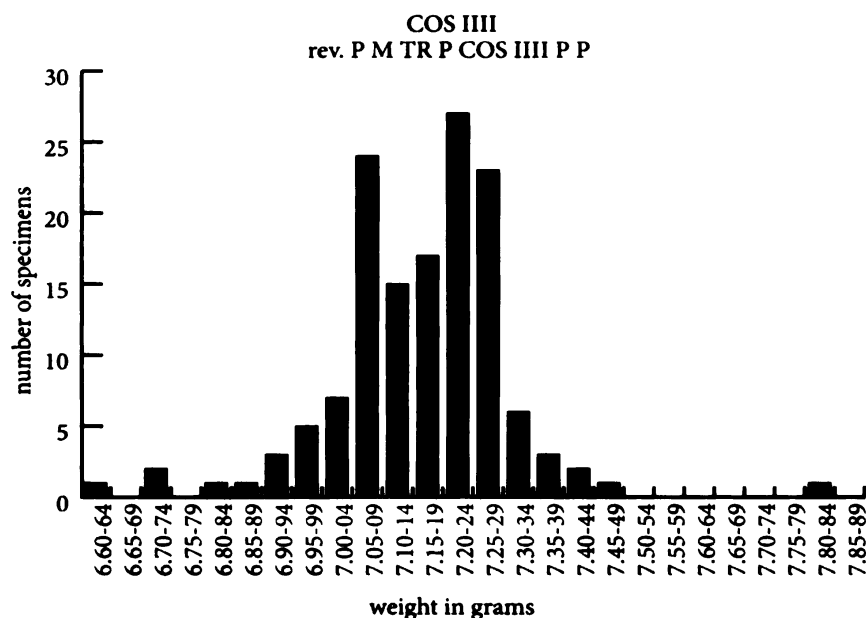


Figure 5. Weights of 139 *aurei* of Trajan, COS IIII (AD 101–102).

Mean weight: 7.16 g.

The metrological information on Trajanic gold coins provided by Mattingly and Sydenham (1926, 242) in the first edition of volume 2 of the standard handbook *The Roman Imperial Coinage* (RIC) is misleading. Without mentioning a change in standards the authors state: “In gold, the aureus and *quinarius* . . . were issued at the reformed Neronian weight.” Bolin, in his influential monograph, also failed to make a clear distinction between heavyweight and lightweight Trajanic *aurei*.<sup>17</sup> While Strack (1931, 12) did not deal with the weight standard of Trajan’s gold coins at all, Mattingly (1936, xiv) briefly surveyed the problem: “The aureus of the heavier standard, as struck by Domitian through almost all his reign, continued over Nerva into the first year of Trajan: it then fell again to the reduced standard of Nero.”<sup>18</sup> West appears not to have been entirely convinced of the correctness of this statement,<sup>19</sup> but Mattingly was, in fact, not too far off the mark,

17. The standard for *aurei* introduced by Nero was temporarily abandoned by Domitian and Nerva, but it was reintroduced by Trajan (Bolin 1958, 191).

18. See also the table of weights provided (Mattingly 1936, xv), with the comment: “The ‘early’ class is of Trajan’s first year only”; Mattingly correctly states that *aurei* of the “heavy” standard occur both in Trajan’s PONT MAX TR POT COS II and in the P M TR P COS II P P issue. He gives the average weight of the two classes as being 7.59 and 7.22 g respectively, adding that a frequency table for the lighter Trajanic *aurei* “shows a peak at . . . 7.19” (xv, n. 2).

19. “It seems probable that early in his reign Trajan reduced the weight of the aureus to the

with one important caveat: one cannot be sure about the absolute dating of Trajan's reduction, as outlined above. Since production of the P M TR P COS II P P issue, in which the metrological change is to be observed, may have started as late as 99, credit once more has to go to Theodor Mommsen. In his *Geschichte des römischen Münzwesens*, working from an exiguous amount of data, Mommsen surmised that the weight standard of Domitian's *aurei* continued not only into the first but possibly into the first two years of Trajan's reign.<sup>20</sup> Mommsen thus prudently left open the possibility that heavy *aurei* were still struck in AD 99.

In recent years, scholarly discussion of the metrology of Trajan's aureus has shifted to the special problem of the character of the lowering of its weight. Wolters has repeatedly argued that there was no abrupt change in gold standards, as Mattingly had postulated, but rather a gradual reduction in the period from AD 98 to 101.<sup>21</sup> King, while accepting that Trajan lowered the aureus weight fairly early in his reign, was rather cautious about Wolters' particular theory. Her reluctance to adopt it was due to the impression that the sample sizes investigated by Wolters were too small to allow far-reaching conclusions.<sup>22</sup> In fact, the concept of a gradual reduction of the aureus standard under Trajan over such a long timespan probably cannot stand. While the issue of AD 98 conforms to Domitian's and Nerva's standard of forty-three to the pound, the issue of AD 100 (COS III) doubtless utilizes the restored Neronian standard of forty-five to the pound, with the metrological differences between the COS III and the subsequent COS IIII issues being minimal. It is true that the intermediate P M TR P COS II P P group represents a transitional stage, but careful analysis has shown that it was struck partly on the old and partly on the new standard.

reformed standard of Nero, but unfortunately the weights of the . . . coins assigned to A.D. 98/99 give no clear point of concentration" (West 1941, 77).

20. "Fühlbar steigt das Gewicht wieder namentlich unter Domitian, dessen Goldstücke selbst im Durchschnitt um 0.2 bis 0.3 Gr. über 1/45 Pfund stehen. Diese reelle Prägung erstreckt sich auch noch auf Nervas Regierung und die ersten zwei Jahre Traians; späterhin hat dieser Kaiser . . . etwa wie Nero gemünzt" (Mommsen 1860, 754). Paribeni cited Mommsen on this matter: "sembra che l'aureo che pesava in media grammi 7,40 sotto i Flavi scenda con Traiano a 7,20" (Paribeni 1926–1927, 2:176–177).

21. "eine allmähliche Reduzierung des Goldgewichts, keine Reform, die diese Maßnahme auf einen Schlag durchführte" (Wolters 1992, 297); "A gradual reduction . . . can be deduced from this—not a reform . . . in one step" (Wolters 1993, 280); "stufenweise[n] Gewichtsreduktion, die . . . erst im Jahr 101 . . . abgeschlossen war" (Wolters 1999a, 118).

22. "The date under Trajan when the standard on which gold was minted reverted to that of Nero has been the subject of some discussion, although there is no doubt that it took place early in the reign. Wolters suggested in a recent study that the reduction was gradual rather than occurring in a single stage. . . . Unfortunately, the sample size of all of his groups is very small. . . . While his theory may be correct, the available evidence is not sufficient to prove it" (King 2007, 122).

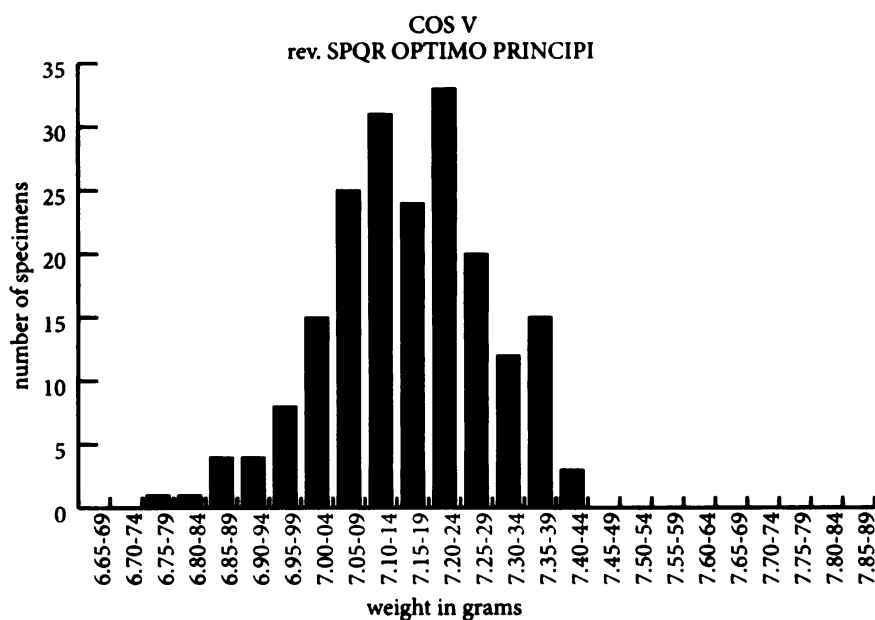


Figure 6. Weights of 196 *aurei* of Trajan, COS V (c. AD 103–107). Mean weight: 7.16 g.

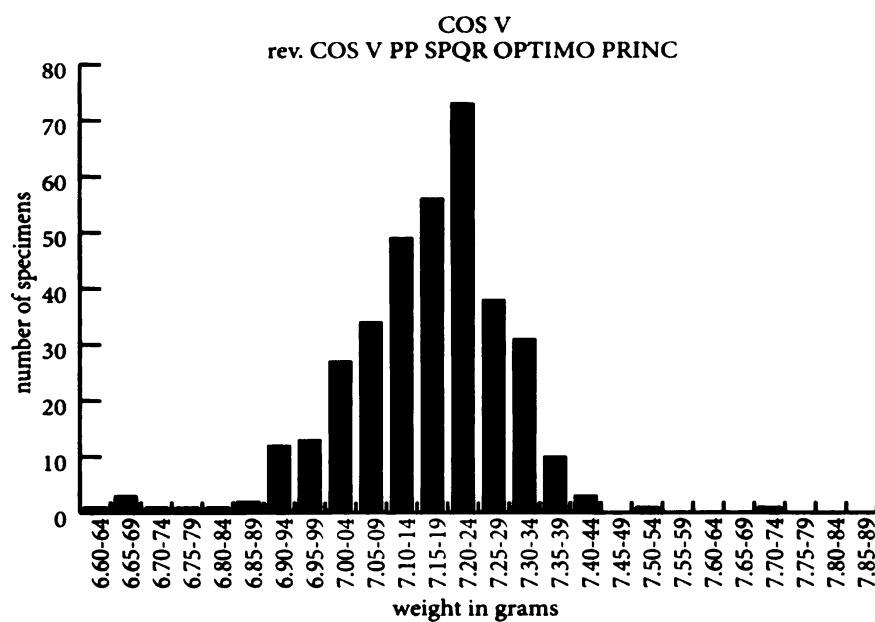


Figure 7. Weights of 357 *aurei* of Trajan, COS V (AD 107–111). Mean weight: 7.16 g.



The mint continued to use the Neronian gold standard reintroduced by Trajan before his third consulate throughout the rest of his reign. Figures 6 and 7 show the weight distributions of Trajanic *aurei* of the two main groups of the COS V period. Both are very large, especially the second one, and both bear legends in the dative case—a typical feature of Trajan's later issues, which is to be observed from late AD 103: IMP TRAIANO AVG GER DAC P M TR P COS V P P (obv.) / SPQR OPTIMO PRINCIPI (rev.),<sup>23</sup> and IMP TRAIANO AVG GER DAC P M TR P (obv.) / COS V PP SPQR OPTIMO PRINC (rev.).<sup>24</sup> As was recognized by Mattingly (1936, lx) and Hill (1970, 36, 139), these two groups were minted consecutively, with the change in legends probably falling in the year of Trajan's second Dacian triumph, AD 107.

Both frequency tables show peaks in the weight range of 7.20–7.24 g, exactly like the *aurei* of the fourth consulate (cf. Fig. 5). The weight distribution of the later group is extremely regular, doubtless due to the large sample size (nearly 360 pieces). The same is true of the first group of COS VI *aurei*,<sup>25</sup> minted before Trajan assumed the title “Optimus” in August AD 114 (Fig. 8). Here the sample is even bigger, nearly 370 pieces, and the distribution is once more very regular; in all these three cases the weight peaks in the range of 7.20–7.24 g clearly support the hypothesis that the intended target weight was 1/45 of a pound. It may be noted that the early COS VI *aurei* were struck rather heavier than the immediately preceding group, as can be deduced from the excellent representation of pieces of the next higher weight range after the peak, viz. 7.25–7.29 g.

This trend continued in the period from summer 114 to February 116, that is, between the senate's vote to add “Optimus” to Trajan's titulature, following the annexation of Armenia, and the emperor's assumption of the title “Parthicus” after his initial successes against the Parthians (see Hanslik 1965, 1097, 1100). The weight peak of *aurei* of this timespan<sup>26</sup> (Fig. 9) is at 7.25–7.29 g, thus marginally higher than in the foregoing groups. The standard of forty-five to the pound was maintained, although the emperor had been at war since October 27, AD 113.<sup>27</sup> The remarkable percentage of *aurei* in the weight range 7.15–7.19 g may perhaps be taken to prefigure a metrological development apparent in Figure 10.

23. For gold and silver of this group, see Strack (1931, nos. 78–113).

24. Strack (1931, nos. 121–163 [gold and silver]).

25. For the precious-metal coins of this group, see Strack (1931, nos. 171–179, 184–197, 202–217a).

26. They belong to two different classes. See Strack (1931, nos. 218–226, 227–240).

27. On the date of his *profectio* for the east, see the discussion by Hanslik (1965, 1094) (with references).

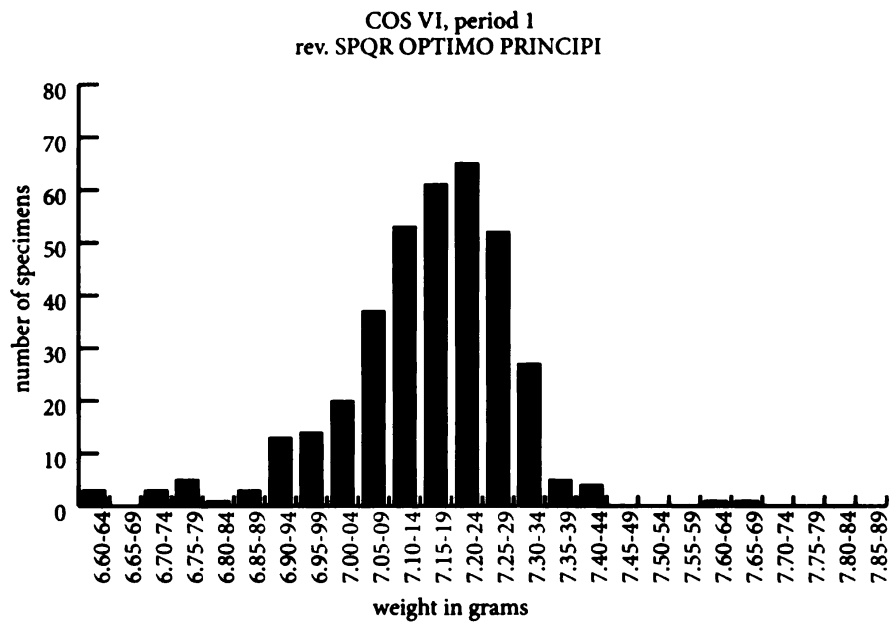


Figure 8. Weights of 368 *aurei* of Trajan, COS VI (AD 112–114). Mean weight: 7.15 g

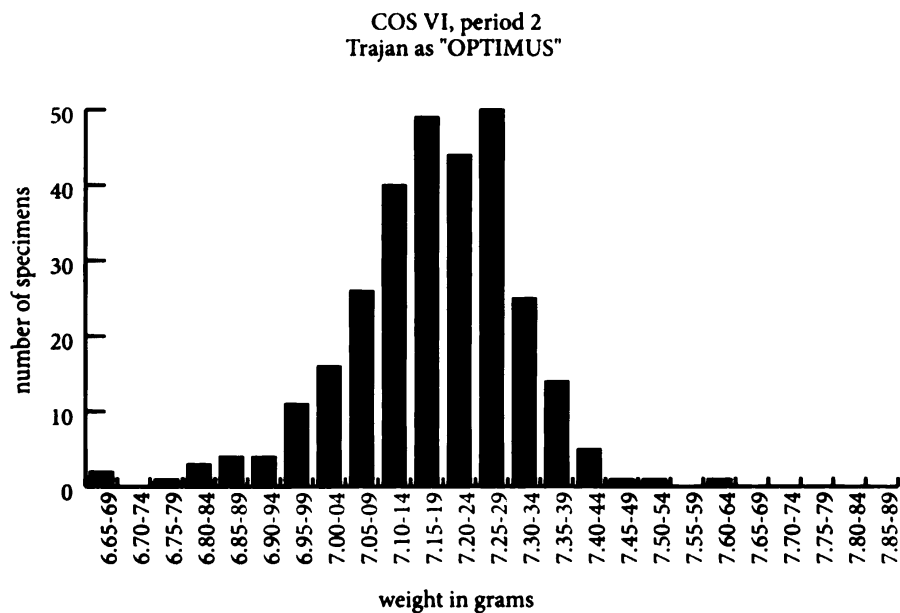


Figure 9. Weights of 297 *aurei* of Trajan, COS VI, Optimus (AD 114–116).  
Mean weight: 7.18 g.

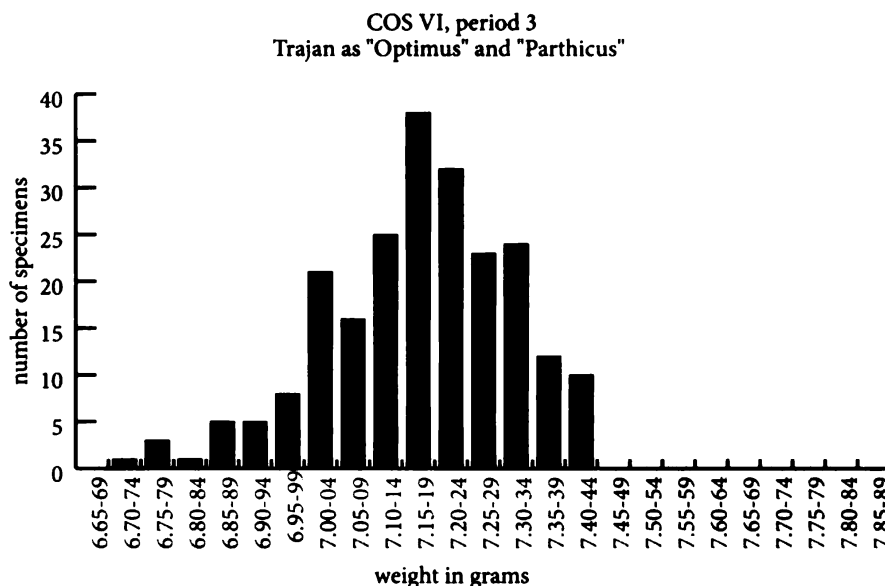


Figure 10. Weights of 224 *aurei* of Trajan, COS VI, Parthicus (AD 116–117).  
Mean weight: 7.17 g.

The frequency table of *aurei* from the final phase of Trajan's rule (Fig. 10) might prompt speculation whether, in the end, the armed conflict was to have repercussions for the weight of the gold coins: In any case, a slight shift downward in weight may be observed for the "Parthicus" coins,<sup>28</sup> the peak in the diagram being only at 7.15–7.19 g. This was not anything like the adoption of a new standard for *aurei*, to be sure—a lowering to 1/46 of a pound would have corresponded to a target weight of 7.11 g, and the metrological structure of the group makes it clear that we are far from that. But it shows that the official standard of forty-five to the pound was achieved with less precision at the end of Trajan's rule than in the preceding groups. The late Trajanic *aurei* tend to be somewhat lighter as a group, although this point should not be pressed. Even so, the evidence suggests that Trajan's heavy fiscal expenditures on his Parthian War might have led to a minimal adjustment of the aureus weight.

A survey of the metrology of Trajan's gold coinage shows that this emperor opted for a return to Nero's aureus standard of forty-five to the pound very early in his reign—even before his entry into Rome, at a time when he was still on an inspection tour of the northern borders of the empire. The shift from the heavier standard of Domitian and Nerva to the lighter was conducted during the minting of the second substantial aureus issue of Trajan's rule bearing the reverse legend

28. Strack (1931) nos. 241–260 (gold and silver).

P M TR P COS II P P, between autumn 98 and the end of 99. From this point on, the Neronian standard was employed—with minor variations—for all of Trajan's aureus issues, while the fineness of the gold coinage was left untouched.<sup>29</sup>

Taken together with the results of metallurgical analyses of Trajanic silver coins performed recently, this evidence indicates that Trajan modelled his monetary policy in regard to the precious metal coinages completely on Nero's. While the decision to switch to Nero's light aureus weight was made in the first or second year of his rule, Trajan's other measure, the reduction in the silver fineness of the *denarii* to the Neronian level, is to be dated to AD 100. All the Trajanic *denarii* of the second consulship (AD 98–99) analyzed with modern methods were found to have been produced on a standard of c. 87 percent silver, on average,<sup>30</sup> whereas the *denarii* struck from his third consulship on contain just c. 80 percent silver. This is exactly the standard created by Nero in AD 64 and used for the majority of his post reform *denarii*, as well as under Vespasian (Butcher and Ponting 2005b, 179; 1998, 312, 321).

Trajan thus reformed the precious-metal coinages in two steps: he reduced the weight of the more valuable gold coins first, and a few months later, in the year of his third consulship, he debased the alloy of the silver coins. What were the motives for his reforms? West (1941, 80) was sceptical on this point: "The reasons that led Trajan to return to the Neronian standard for gold and silver are no more clear than the reasons that led Domitian to attempt a return to the standards of the pre-Neronian period." In the meantime, the background of the changes under Domitian has been studied in detail by Carradice (1983, 163), who convincingly held that "Domitian's monetary reform of 82 can be seen as part of a much wider policy to restore former standards of morals and order." Indeed, the rare efforts to improve the quality of the coinage during the Principate can best be understood in the context of restorative political concepts,<sup>31</sup> while reductions in standard often are to be put down to fiscal stress. Domitian's debasement in AD 85, for example, was probably a consequence of the huge army pay increase of 84 and should also be seen in connection with further military campaigns to be conducted by Domitian in the years 85 to 87: "There can be no doubt that this was an economic necessity" (Carradice 1983, 162).

29. Trajanic *aurei* average c. 99 percent, just like the gold coins of his predecessors; for metallurgical analyses, see Callu et al. (1985, 82–83), Blet-Lemarquand (2006, 168–169).

30. Twenty-one *denarii* of Trajan's second consulship analyzed by Butcher and Ponting (1998, 312, 322) were found to have a fineness between 84.3 and 91.8 percent; eight *denarii* of this period analyzed in Vienna (Woytek et al. 2007) were found to contain between 85.3 and 94.0 percent.

31. This view is shared by Wolters (1999b), 405.

I propose to view Trajan's reduction of precious-metal standards early in his reign in this perspective, too. It seems that this emperor, practically from the outset of his reign, was taking measures to relieve the state's budget by cutting expenses in the production of coinage. For a ruler who had no moral objections to this strategy, it was a straightforward choice. Nero had demonstrated successfully that it was simply of no use to invest more precious metal in this sector than necessary, and the weight and fineness standards set by Nero had proved to be high enough to maintain a functioning monetary economy; Trajan was happy to follow his example. As for the precise reasons that induced him to pursue a policy of economizing from the beginning of his rule, different suggestions may be made.

Bennett (1997, 127–128), in a recent biography of Trajan that met with a lot of criticism,<sup>32</sup> ventured a short-term explanation: the debasement was carried out in view of the extraordinary expenditure due soon after Trajan's accession, viz. the donative for the troops and the *congiarium* to be paid to the citizens of Rome—as is well known, spending pressures at the start of a new reign were typically very high.<sup>33</sup> Evidence on Trajan's payments in this period comes from three different sources, two texts and a coin type: Pliny (*Panegyricus* 25.2) records *datumque congiarium populo, et datum totum, cum donativi partem milites accepissent* (“the *congiarium* given to the people, paid out in full, while the soldiers had received just a part of their *donativum*”). He heaps praises on Trajan, his *liberalitas*, and especially his equal treatment of the people of Rome and the soldiers—quite a paradox, given the fact that the latter had reportedly received in cash just a part of the sum due: *aequati sunt . . . populo milites eo quod partem, sed priores, populus militibus quod posterior, sed totum statim accepit*.<sup>34</sup> Both payments (first the donative, later the *congiarium*) had been made long before the day when the *Panegyricus* was delivered, on September 1, AD 100 (on the date of publication, see Woytek 2006). *Sestertii* of Trajan depicting the scene of the distribution of the *congiarium* in the

32. See, e. g., Seelentag (2004, 16, n. 10) (with reference to a review by W. Eck).

33. On this point, see Harl (1996, 221–222), Duncan-Jones (1994, 238–239), and Wolters (1999b, 247–248). On *congiaria* in general, see van Berchem (1939).

34. “The soldiers were equated with the people in that they were paid first, but only in part, the people with the soldiers in that they were paid second, but received the full sum at once” (*Panegyricus* 25.2). Seelentag (2004, 180–182) misinterprets the passage to the effect that Trajan had paid already two donatives to the soldiers at the time when the *Panegyricus* was drafted, in AD 100. Wolters (1999a, 124, n. 29) draws attention to the fact that, according to Vegetius (*Epitoma Rei Militaris* 2.20), customarily only one half of donatives was paid out in cash, while the second half was kept in the troop's chest (or, more precisely, was transferred to the soldiers' accounts): *Illud vero ab antiquis divinitus institutum est, ut ex donativo, quod milites consecuntur, dimidia pars sequestraretur apud signa et ibidem ipsis militibus servaretur, ne per luxum aut inaniam rerum comparationem ab contubernalibus posset absumi*. According to Wolters, Trajan may therefore have followed the normal practice.

emperor's presence and bearing the date COS II<sup>35</sup> give us the clue to a closer dating of this event. It must have taken place after the ruler's return to Rome in the autumn of 99, but before his designation for the third consulship, which probably occurred in October or November of the same year.

There is no precise indication in the sources as to when the donative to the army was paid, although a date immediately after the accession is generally assumed (Seelentag 2004, 180, n. 2). Nor do we know the amount of the donative,<sup>36</sup> while the Chronographer of the year 354 records the figure of 650 *denarii* for Trajan's *congiarium*/-a.<sup>37</sup> Since the emperor distributed two further *congiaria* after his two Dacian triumphs, in 103 and 107,<sup>38</sup> this remarkable sum may represent an addition of all three gifts,<sup>39</sup> although the reliability of the source has been challenged even on this assumption (Duncan-Jones 1994, 249). Domitian had distributed three *congiaria* of only seventy-five *denarii* each, as Suetonius and the Chronographer record,<sup>40</sup> and Nerva had given this typical amount once, as the latter source notes. Unfortunately, we must conclude that there is little hard evidence for Trajan's spending on the donative and *congiarium* at the beginning of his reign, and the total sums involved—indeed, even the individual amounts—remain more or less unknown.

Nevertheless, it is quite clear that the accession donative for the legions must have been granted during the first year of Trajan's reign, in AD 98, which he spent entirely on the Rhine and Danube. It is implausible that the new emperor would have taken the risk of delaying the payday unduly. Most probably, the donative will therefore have been paid out in a period to which the PONT MAX TR POT COS II issue belongs—in other words, at a time when the aureus standard had not yet been lowered. The *congiarium* of autumn 99, on the other hand, was in all likelihood distributed in freshly minted P M TR P COS II P P *aurei* of the restored Neronian standard of forty-five to the pound.

35. Strack (1931, no. 323). Legends: IMP CAES NERVA TRAIAN AVG GERM P M TR P (obv.)/COS II P P CONG(iarium) P(opulo) R(omano) (rev.).

36. For comparative figures, see Duncan-Jones (1994, 257).

37. Chronographus anni CCCLIII p. 146 Mommsen (Monumenta Germaniae Historica, Auctores Antiquissimi IX/1): *Traianus cong. dedit X DCL*.

38. Both are recorded on *sestertii*. See Strack (1931, nos. 356 [CONGIAR SECVND; AD 103], 415 [CONGIARIVM TERTIVM; AD 107]).

39. Syme (1930, 59) first examined the possibility that the figure represents a single *congiarium*—perhaps the payment of AD 99—before he took it to be an addition of three, still “a monstrous total.” Paribeni (1926–1927, 1:268) thought that the *congiarium* of AD 103 alone amounted to 650 *denarii*.

40. Suetonius, Domitianus 4.5; his statement is confirmed by a precise indication of the Chronographer: *congiarium dedit ter X LXXV*. On Domitian's *congiaria*, see Rogers (1984, 63).

That the government was able to economize on bullion by paying out the *congiarium* of AD 99 in lighter *aurei* will have been a most welcome collateral effect of the monetary reform, but it would not have been its primary goal, as Bennett thought. This may be deduced, *inter alia*, from the fact that the lowering of the aureus standard was not an isolated incident but was accompanied by a debasement of the denarius in the following year,<sup>41</sup> when both *congiarium* and *donativum* had long been distributed. Evidently, this reform was not planned as a short-term measure. Trajan's debasement rather has to be interpreted under the aspect of the long-range political and military program of the emperor at the outset of his reign. It is pretty clear that Trajan planned to conquer Dacia from his accession; the costly preparations of the war would have begun immediately, and the emperor may have decided to return to Nero's lower precious-metal standards mainly in order to finance his aggressive foreign policy.

#### REFERENCES

- Alfaro Asins, C. 1993. *Catalogo de las monedas antiguas de oro del Museo Arqueologico Nacional*. Madrid: Museo Arqueologico Nacional.
- Bennett, J. 1997. *Trajan. Optimus Princeps. A life and times*. London: Routledge.
- Berchem, D. van. 1939. *Les distributions de blé et d'argent à la plèbe romaine sous l'empire*. Geneva: Georg & Cie. S. A., Librairie de l'Université.
- Blet-Lemarquand, M. 2006. Analysis of Kushana gold coins: Debasement and provenance study. In *Dal denarius al dinar. L'oriente e la moneta romana. Atti dell'incontro di studio, Roma 16–18 settembre 2004*, F. De Romanis and S. Sorda, eds., 155–171. Studi e Materiali 12. Rome: Istituto Italiano di Numismatica.
- Bolin, S. 1958. *State and currency in the Roman Empire to 300 AD*. Stockholm: Almqvist & Wiksell.
- Butcher, K., and M. Ponting. 1998. Atomic absorption spectrometry and Roman silver coins. In *Metallurgy in numismatics*, A. Oddy and M. Cowell, eds., 4: 308–334. Royal Numismatic Society Special Publication 30. London: The Royal Numismatic Society.
- . 2005a. The Egyptian billon tetradrachm under the Julio-Claudian emperors—fiduciary or intrinsic? *Schweizerische Numismatische Rundschau* 84: 93–124.

41. This must not be interpreted merely as a measure to adjust the relation between gold and silver coins once the weight standard of the gold had been reduced (see also Wolters 1993, 275). Changes in one metal did not necessarily entail alterations to the other, as may be seen, e.g., from Nero's last denarius issue produced on a 90 percent standard, while the weight of the aureus was left unchanged (Butcher and Ponting 2005b, 179–180).

- . 2005b. The Roman denarius under the Julio-Claudian emperors: Mints, metallurgy, and technology. *Oxford Journal of Archaeology* 24: 163–197.
- Callu, J. P., et al. 1985. Aureus obryziacus. In *L'or monnayé I. Purification et altérations de Rome à Byzance*, C. Morrisson et al., eds., 81–111. Cahiers Ernest-Babelon 2. Paris: Editions du Centre National de la Recherche Scientifique.
- Carradice, I. 1983. *Coinage and finances in the reign of Domitian, AD. 81–96*. BAR International Series 178. Oxford.
- Dierauer, J. 1868. *Beiträge zu einer kritischen Geschichte Trajans*. Leipzig: B. G. Teubner.
- Duncan-Jones, R. 1994. *Money and government in the Roman Empire*. Cambridge: Cambridge University Press.
- Ehrhardt, N., and P. Weiss. 1995. Trajan, Didyma und Milet. Neue Fragmente von Kaiserbriefen und ihr Kontext. *Chiron* 25: 315–355.
- Elsen, J. 2004. Le système pondéral romano-byzantin (fin 3e siècle–fin 8e siècle). *Jean Elsen & ses Fils s. a., FPL* 230 (October–December): 1–11.
- Giard, J.-B. 1998. *Monnaies de l'Empire romain. III. Du soulèvement de 68 après J.-C. à Nerva. Catalogue*. Paris/Strasbourg: Bibliothèque nationale de France/Poinsignon Numismatique.
- Haalebos, J. K. 1999. Traian und die Auxilia am Niederrhein. Ein Militärdiplom des Jahres 98 n. Chr. aus Elst (Niederlande). In *Traian in Germanien, Traian im Reich. Bericht des dritten Saalburgkolloquiums*, E. Schallmayer, ed., 207–212. Saalburg-Schriften 5. Bad Homburg v. d. H.: Saalburgmuseum Bad Homburg v. d. H.
- Hahn, W. 2005. Zur Metrologie des römischen Pfundes. Die Evidenz des langobardenzeitlichen Schatzfundes von Aldrans (1991). *Numismatische Zeitschrift* 113/114: 279–282.
- Hanslik, R. 1965. Ulpus 1a: M. Ulpus Traianus. Römischer Kaiser 98–117, *Paulys Real-Encyclopädie der classischen Altertumswissenschaft*. Supplementband 10: 1035–1102.
- Harl, K. W. 1996. *Coinage in the Roman Economy, 300 BC to AD 700*. Baltimore: The Johns Hopkins University Press.
- Hill, G. F. 1924. The frequency-table. *Numismatic Chronicle* (5th ser.) 4: 76–85.
- Hill, P. V. 1970. *The dating and arrangement of the undated coins of Rome AD 98–148*. London: Spink & Son.
- Hultsch, F. 1882. *Griechische und römische Metrologie*. 2nd ed. Berlin: Weidmannsche Buchhandlung.
- Jameson, R. 1980. *Collection R. Jameson. Vol. 2, Monnaies Impériales Romaines. Description et Planches*. Revised Reprint of the Edition Paris 1913–1932. Chicago: Obol International.



- King, C. E. 2007. *Roman quinarii from the Republic to Diocletian and the Tetrarchy*. Oxford: The Ashmolean Museum.
- Ljubić, S. 1876. Der Fund römischer Goldmünzen aus dem ersten Jahrhunderte der Kaiserzeit gemacht in Semlin in [sic] der kroatisch-slavonischen Militärgrenze am 16. Dezember 1875. Agram: C. Albrecht (offprint from *Rad* 35).
- Mattingly, H. 1936 [reprinted with revisions, 1976]. *Coins of the Roman Empire in the British Museum*. Vol. 3, *Nerva to Hadrian*. London: British Museum Publications.
- Mattingly, H., and E. A. Sydenham. 1926 [reprinted 1989]. *The Roman imperial coinage*. Vol. 2, *Vespasian to Hadrian*. London: Spink & Son.
- Mazzini, Ing. G. 1957. *Monete Imperiali Romane*. Vol. 2, *Da Nerva a Crispina*. Milan: Mario Ratto.
- Mommsen, T. 1860. *Geschichte des römischen Münzwesens*. Berlin: Weidmannsche Buchhandlung.
- . 1887 [reprinted 1969]. *Römisches Staatsrecht*. Vol. 1, 3rd ed. Leipzig: S. Hirzel.
- Paribeni, R. 1926–1927. *Optimus Princeps. Saggio sulla storia e sui tempi dell'imperatore Traiano*. 2 vols. Messina: Casa Editrice G. Principato.
- Robertson, A. S. 1962. *Roman imperial coins in the Hunter Coin Cabinet, University of Glasgow*. Vol. 1, *Augustus to Nerva*. Oxford: Oxford University Press.
- . 1971. *Roman imperial coins in the Hunter Coin Cabinet, University of Glasgow*. Vol. 2, *Trajan to Commodus*. Oxford: Oxford University Press.
- Rogers, P. M. 1984. Domitian and the Finances of State. *Historia* 33: 60–78.
- Seelentag, G. 2004. *Taten und Tugenden Traians. Herrschaftsdarstellung im Principat*. Hermes Einzelschriften 91. Stuttgart: Franz Steiner.
- Strack, P. L. 1931. *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts. Teil I: Die Reichsprägung zur Zeit des Traian*. Stuttgart: W. Kohlhammer.
- Syme, R. 1930. The imperial finances under Domitian, Nerva, and Trajan. *Journal of Roman Studies* 20: 55–70.
- Walker, D. R. 1977. *The metrology of the Roman silver coinage*. Part 2, *From Nerva to Commodus*. BAR Supplementary Series 22. Oxford.
- West, L. C. 1941. *Gold and silver coin standards in the Roman Empire*. Numismatic Notes and Monographs 94. New York: The American Numismatic Society.
- Wolters, R. 1992. Der Aufbau der Prägungen in den ersten Regierungsjahren des Traianus. *Litterae Numismaticae Vindobonenses* 4: 281–299.
- . 1993. Money and coinage in the reign of Trajan. In *Actes du XIe Congrès International de Numismatique [ . . . ] Bruxelles, 8–13 septembre 1991*. Vol. 2, *Monnaies celtiques et romaines*, T. Hackens et al., eds., 275–280. Louvain-la-Neuve: Séminaire de Numismatique Marcel Hoc.

- . 1999a. Traians Außenpolitik und die Finanzen des Reiches. In *Traian in Germanien, Traian im Reich. Bericht des dritten Saalburgkolloquiums*, E. Schallmayer, ed., 115–125. Saalburg-Schriften 5. Bad Homburg v. d. H.: Saalburgmuseum Bad Homburg v. d. H.
- . 1999b. *Nummi signati. Untersuchungen zur römischen Münzprägung und Geldwirtschaft*. Vestigia 49. Munich: C. H. Beck'sche Verlagsbuchhandlung.
- Woytek, B. 2003. *Arma et nummi. Forschungen zur römischen Finanzgeschichte und Münzprägung der Jahre 49 bis 42 v. Chr.* Vienna: Verlag der Österreichischen Akademie der Wissenschaften.
- . 2004. Iulius Caesar und das Nominaliensystem der römischen Reichsprägung in der Principatszeit. In *Ad fontes! Festschrift für Gerhard Dobesch zum fünfundsechzigsten Geburtstag am 15. September 2004*, H. Heftner and K. Tomaschitz, eds., 343–353. Vienna: Eigenverlag der Herausgeber.
- , et al. 2007. The denarius under Trajan: New metallurgical analyses. *Numismatic Chronicle* 167: 147–163.
- Woytek, E. 2006. Der Panegyricus des Plinius. Sein Verhältnis zum Dialogus und den Historiae des Tacitus und seine absolute Datierung. *Wiener Studien* 119: 115–156.



## The early coinage of Hadrian and the deified Trajan at Rome and Alexandria

PLATES 96–97

ANDREW BURNETT\*

The evidence for the acknowledgment of Hadrian before Trajan's death is assessed, especially the question of the authenticity of two *aurei* for Trajan "Hadrian Ceasar." An examination of Hadrian's *aurei* for the deified Trajan precedes discussion of the very rare coins of Hadrian's reign from Alexandria depicting Hadrian and Trajan, and why the early Alexandrian coins of Hadrian's reign misspell the adopted name 'Traianus.' This is all regarded as an indication of the complete lack of preparation in the mints of Rome and Alexandria for Trajan's death and Hadrian's accession. The empire was saved from civil war and chaos by Hadrian's decisiveness.

### HADRIAN'S ADOPTION

Trajan died at Selinus on 8 or 9 August 117, and a tetrastyle temple inscribed ΘΕΟΥ ΤΡΑΙΑΝΟΥ is sometimes depicted on the rare coins of Selinus (now named Trajanopolis Selinus) during the late second and third centuries (Pl. 96, 1).<sup>1</sup> Hadrian was acclaimed as emperor on 11 August by the Syrian army. As is well known,

\*ABURNETT@thebritishmuseum.ac.uk

1. See E. Levante, "The Coinage of Selinus in Cilicia," *Numismatic Chronicle* 150 (1990), 226–33: the coins first appear under Marcus Aurelius (SNG Levante 460), and subsequently for Septimius Severus, Severus Alexander, Maximinus, Trajan Decius and Herennia Etruscilla. The seated figure in the temple holds a thunderbolt and a sceptre, and was described as 'Zeus Keraunos with the probable features of Trajan' by Levante; but the inscription surely means that it is a figure of Trajan likened to Zeus. Apart from this issue and the coins of Rome and Alexandria, discussed below, no other mints or cities produced coins of the deified Trajan (thanks to M. Amandry for confirming this).

there is some uncertainty about whether or not Trajan had adopted Hadrian before his death or whether the adoption was 'invented' by Plotina immediately afterwards. ADOPTIO is the main theme of the very earliest coins of Hadrian's reign, but does not occur earlier under Trajan (Pl. 96, 2).

It is perhaps something of a surprise that Hadrian's succession to Trajan was a poorly organised event, open to interpretation at the time, and one that might even have taken a very different direction. The much later *Historia Augusta* claims that there was a widespread belief that Trajan had intended to make L. Neratius Priscus his successor.<sup>2</sup> Dio, also writing long after the events he describes, records that Trajan had once said that L. Iulius Servianus, the husband of Hadrian's sister, was the man most capable to rule.<sup>3</sup>

Hadrian's claim to the throne was good, but not, indeed, very strong. He had been admitted to Trajan's *consilium* at a young age; he had been married to Trajan's closest eligible relative; and he had been left in charge of the Syrian army when the sickening Trajan set off for Rome in 117. These were perhaps all signals, but they were not unambiguous. Thus the succession could have been a disaster, if not a rerun of the disaster of fifty years earlier. There were many other potential opponents. Apart from Priscus and Servianus, Hadrian was urged immediately to dispose of Baebius Macer, the prefect of Rome, and the former generals M'. Laberius Maximus and C. Calpurnius Crassus Frugi.<sup>4</sup> And he did indeed, and notoriously, shortly afterwards act swiftly against others;<sup>5</sup> this was the origin of the long-lasting hostility to him from the senatorial order, a hostility that colors his later reputation. With so many rivals, Trajan's lack of foresight created a potential problem. It is hard to avoid recalling the judgment of the *Historia Augusta* that, like Alexander the Great, Trajan intended to die without a successor.<sup>6</sup> Or perhaps we might rather think that, like Alexander, Trajan thought himself invincible and immortal. The vanity of the comparison might well have clouded his judgement.

There is, however, some numismatic evidence for Hadrian's acknowledgement by Trajan before Trajan's death, which might imply a slightly better picture of succession planning. "There remains," wrote Bennett in his biography, "the enigmatic coin of Trajan with his titulature for mid-114–early 116, which depicts Hadrian on the reverse with the legend HADRIANO TRAIANO CAESARI (*BMC*, p. 124): if

2. *Historia Augusta*, Hadrian 4.8.

3. Dio 69.17. See W. den Boer, "Trajan's deification and Hadrian's succession," *Ancient Society* 6 (1975), pp. 203–12.

4. *Historia Augusta*, Hadrian 5.5.

5. J. Bennett, *Trajan Optimus Princeps* (London/New York 1997), p. 203; A. Cornelius Palma, L. Publilius Celsus, Avidius Nigrinus and Lusius Quietus.

6. *Historia Augusta*, Hadrian 4.8.

genuine, it directly contradicts the documentary evidence in signalling Hadrian's adoption during that period."<sup>7</sup>

The coin is also illustrated and mentioned by Birley in his biography of Hadrian.<sup>8</sup> In his caption he dates the coin to 'late summer 117', and in his text seems to imply that it was minted after Hadrian's accession, by late September.

There are now, in fact, two such coins, both gold *aurei* from the mint of Rome. The first used to be in the Paris collection, and, although it was stolen in the robbery of 1831, it survives in the form of casts made before the robbery.<sup>9</sup> The second turned up in the international art trade a few years ago. They have the same description, and indeed are struck from the same dies:

IMP CAES NER TRAIAN OPTIM AVG GERM DAC; laureate, draped and cuirassed bust of Trajan r. (seen from rear)

HADRIANO TRAIANO CAESARI; laureate bust of Hadrian with drapery on shoulder r.

1. Formerly in Paris, but known from a replica in Berlin (Pl. 96, 3);<sup>10</sup>
2. Berk 94 (1997), lot 11 = Numismatica Ars Classica Auction 24, 5 December 2002, lot 80, 6.99 g (Pl. 96, 4).

Several questions arise. First, date. Bennett dated the Paris coin early, to 114–116, I think because of the absence of the title *Parthicus*. However, the latest coins of Trajan's reign in 117 omit the title from the obverse inscription, because the inscription wraps round from the obverse to the reverse, and that is where *Parthicus* normally occurs on such coins. Moreover the latest obverse inscription, VI, in Mattingly's classification, has the form TRAIAN, whereas the otherwise similar but earlier obverse inscription IV, struck in 115–16, has TRAIANO. So the coins of Hadrian Caesar could date to this late period, if, as Strack suggested, they were using an obverse die of that period. Both he and Mattingly thought that, if genuine, the date would presumably be mid AD 117, during the few days before the news of Trajan's death had reached Rome.<sup>11</sup> Beckmann has, however, recently suggested that we cannot

7. Bennett, p. 274, note 102.

8. R. Birley, *Hadrian. The restless emperor* (London, 1997), p. 81.

9. One in the Berlin Museum (many thanks to Bernhard Weissner for locating it and to Karsten Dahmen for the photo), and the other said by Mattingly and Strack to be in the British Museum, but I cannot find it.

10. P. L. Strack, *Untersuchungen zur Geschichte der Kaiser Nerva, Traian und Hadrian. Teil 1, Die Reichsprägung zur Zeit des Traian* (Stuttgart 1931), Taf. X no. 260; BMC p. 124 \*; RIC Trajan 724a = RIC Hadrian 1.

11. Strack, pp. 230–1. BMC p. cxiv: 'purporting to be struck before the news of Trajan's death ... reached Rome'; also H. Mattingly, "Some historical coins of Hadrian," *Journal of Roman Studies* 1925 (15), 209–222, pp. 211–2.

be sure that the use of obverse VI came after the use of obverse V, and, if this is so, then we must allow the possibility that both V and VI were in use in 116 and 117.<sup>12</sup>

Second, are the coins genuine? The authenticity of the lost Paris coin was merely assumed by Mattingly, but discussed by Strack, who argued for it. Unfortunately it could not then and cannot now be examined (nor indeed can the new coin as its present whereabouts are not known). Strack accepted it as genuine, partly, it seems, because other authorities such as Kurt Regling had accepted it, and partly indeed because of the obverse inscription, since in his view—correctly for mid 117—it omits the title PARTHICO.

How do matters stand now, with the appearance of a second specimen? The new coin is struck from the same dies as the Paris one. If it were a fake then one of two scenarios would have to apply: (a) if the two coins were both struck from a forger's dies made sometime before 1831,<sup>13</sup> then we would have to believe that the second specimen had lain somewhere unrecognized for almost 200 years before coming to light. That cannot be formally excluded, but perhaps seems unlikely, given the great interest of the coin; or (b), the new coin could have been forged in some way from the replicas of the Paris coin surviving in London and Berlin. This also seems unlikely, since the replicas are not well known: the London one cannot be found, while the Berlin one was illustrated only once (in Strack's book, of 1931). And even if the new coin were faked in that way, that would not reflect on the authenticity of the Paris coin, which would have to stand or fall on its own merits.

So, from the formal point of view, it seems unlikely that both the coins are fakes. But if this cannot be definitely proven by circumstantial evidence, what does an examination of the coins themselves—as far as we can do this without having the coins before us—tell us?

The obverse portrait and inscription, as discussed above, are normal for late 117. If we could find an obverse die link then that would almost certainly clinch the authenticity of the coin. However, the recently published and very full study by Beckmann has not discovered such a die identity. For this group of Trajanic coinage he has identified a total of 45 obverse dies among the 119 coins he has collected for his study. As one would expect from these figures, a number of the obverse dies are known from only single specimens, so we cannot make any deduction from the lack of an obverse die link. But what we can see from his study is that the style of the Trajanic obverse die used for the Hadrian Caesar coins is very similar to that in use for other contemporary *aurei*.

12. M. Beckmann, "Trajan's gold coinage, AD 112–117," *American Journal of Numismatics* 19 (2007), pp. 77–129, at 87–8.

13. It seems that nothing is known of the previous history of the coin (thanks to M. Amandry for this information).

As far as we can tell, the coins are also fine from the technical point of view. They are the right size, and the weight of the new one, 6.99 g, is what we might expect for an aureus of this date. Although the theoretical weight for Trajan was 7.34, the actual weights were somewhat lower, and, for example, the 98 coins in the Belgian hoard had a mean weight of 7.07 g.<sup>14</sup> The actual weights recorded by Mattingly for the three coins in the BM with obverse VI are 6.98, 7.30, 7.19. So the weight of the new piece is in the correct range.<sup>15</sup>

The reverse, however, is more puzzling. The portrait looks fine for a young Hadrian, although it is perhaps surprising to find the heroic depiction of him, naked but with some drapery thrown over his left shoulder. This was indeed a style favored by Hadrian in his own reign, and we do find some similar depictions on early *denarii* of his reign (Pl. 96, 5–6),<sup>16</sup> but one might perhaps have expected a more restrained representation, as we find for Trajan on the obverse and more commonly for Hadrian at the very beginning of his reign.

To my mind, however, the main problem is with the strange reverse inscription, as I don't really understand how Hadrian could have been called *Hadrianus Traianus Caesar*. The problem is with the order of the names, with *Traianus* coming after *Hadrianus*. The earliest issues at Rome in Hadrian's own name have the other order, as in IMP CAESTRAIAN HADRIAN(O) OPT AVG GER DAC. Even though the Rome mint was at first confused about Hadrian's titles (a confusion that was quickly corrected: see below), the mint is consistently clear about the adoption of the name *Traianus* and its placing before *Hadrianus*.

The rules about Roman adoptive names were clear during the Republic, over a century earlier. If a man was adopted, he took his father's names and usually added as an *agnomen* at the end a name derived from his own *nomen*, ending -anus. Thus two of the sons of L. Aemilius Paullus, the conqueror of Macedonia, were adopted; one, by Quintus Fabius Maximus, became Quintus Fabius Maximus Aemilianus and one, by Publius Cornelius Scipio, therefore became P. Cornelius Scipio Aemilianus. This system, however, broke down at the end of the Republic: two famous examples are Brutus (born M. Iunius Brutus, but called himself Quintus Servilius Caepio Brutus after his adoption by Quintus Servilius Caepio, rather than Quintus Servilius Caepio Iunianus) and Octavian (born C. Octavius, but called himself C. Iulius Caesar after his adoption by Julius Caesar instead of C. Iulius Caesar Octavianus).

14. R. Duncan-Jones, *Money and government in the Roman Empire* (Cambridge, 1994), pp. 215–9 (theoretical weight), 182 (hoard medians).

15. Unfortunately we don't know the die axis of either piece. This might be of assistance, as the die axis of late Trajanic *aurei* is always 6 o'clock.

16. E.g. BMC 8, 24. Curiously the heroic bust appears only on silver, but not on gold, at the very beginning of the reign.



In the imperial period it was normal for an adopted man to take the *praenomen* and *nomen* of his adoptive father, and he might add to it his own *cognomen*: so, for example, Hadrian's brother-in-law, mentioned above, was born Ser. Iulius Servianus but called L. Iulius Ursus Servianus after his adoption by L. Iulius Ursus.<sup>17</sup> On that basis P. Aelius Hadrianus, after his adoption by Trajan (M. Ulpius Traianus) would perhaps have become M. Ulpius Traianus Hadrianus; but, since Trajan was an emperor (Imp Caesar Traianus) we would have expected him to become Caesar Traianus Hadrianus (and that is exactly how he styles himself in his own reign).

However, the nomenclature of imperial adoptees is not an easy subject, if indeed there were really any rules, especially in the case of imperial succession. If we look at the evidence for the names of men after their adoption by ruling emperors we find an amazing variety, to take a few examples:

Common name	Original name	Adoptive father	New name
Tiberius	Ti. Claudius Nero	Augustus	Ti. Caesar Aug f.
Nero	L. Domitius Ahenobarbus	Claudius	Nero Claudius Drusus Germanicus
Trajan	M. Ulpius Traianus	Nerva	(Caesar) M. Ulpius Nerva Traianus <sup>18</sup>
Aelius	L. Ceionius Commodus Verus	Hadrian	L. Aelius Verus Caesar
Antoninus Pius	T. Aurelius Fulvus Antoninus	Hadrian	Imp T. Aelius Caesar Antoninus

Faced with this variety of nomenclature, one cannot conclude that the form Hadrianus Traianus Caesar is impossible. It is certainly very odd with the name of the adoptive father following the name of the son, rather than the normal sequence. Yet, although there seems no other example of a 'reversed order', this very oddity, on the principle of *lectio difficilior*, perhaps also supports the authenticity of the coin. Surely any forger, whose abilities, even if they were not those of a Roman prosopographer, were certainly those of a numismatist who knew the coins of Trajan and Hadrian so well, would have been aware that Hadrian always placed his name after that of his adoptive father.

Thus, although we have struggled, in the preceding discussion, to find a decisive point for or against authenticity, it can be seen that the weight of evidence

17. O. Salomies, *Adoptive and polyonymous nomenclature in the Roman Empire* (Helsinki, 1992). Salomies shows that there were many other possibilities.

18. Bennett, *Trajan*, p. 46.

clearly favors it, even though we must admit that we have not attained certainty.

A final sort of consideration would be to look for any corroborative evidence in the later Trajanic coinage that might suggest an awareness of Hadrian's new position as Caesar. Beckmann rightly rejects the idea that the PRO-VID or PRO-AVG or 'foresight of the emperor' that appears on late Trajanic coins refers to Hadrian's adoption, since it appears too early in date.<sup>19</sup>

When we look at the pattern of Trajan's late coin designs more systematically, we find:

Designs used at end of Trajan's reign, gold and silver

	Optimus 1	Optimus 2	Parthicus 1	Parthicus 2
	114	115-16	116-17	116-17
<i>Augusti Profectio</i> Trajan on horse	X	X		
Jupiter standing with small Trajan	X	X		
Mars advancing	X	X	X	X
Felicitas standing	X	X	X	X
Bonus Eventus <sup>20</sup>	X	X	X	
Virtus standing	X	X	X	X
Pax standing	X		X	
Trajan's column	X	X		
<i>Fort Red</i> seated	X	X	X	X
<i>Imperator VII</i> Trajan and soldiers	X			
<i>Rex parthus</i> Trajan and king	X			
<i>Pro(vid)</i> (Aug) standing		X	X	X
<i>Salus Aug</i> seated		X		X
<i>Vota suscepta</i> Genii		X	X	
<i>Regna adsignata</i> Trajan and 3 kings		X	X	
Sol head		X	X	X
<i>Parthia capta</i> Trophy and captives			X	
Hadrian Caesar				X

It can be seen that there is nothing in the designs used that can be taken in any way as possibly referring to an adoption of Hadrian.

19. Beckmann, *op. cit.*, p. 85. He attributes this view to Mattingly, but Mattingly was, of course, aware of the chronology. However, Mattingly's view (*BMC* p. lxxxv), that *Providentia* might nevertheless be 'reasonably taken to suggest interest in the vital problem of the succession' is hardly satisfactory.

20. Genius in *BMC*.

We should not however, forget the coinage of Trajan's family, in the names of Plotina, Matidia and Marciana. There is a design for coins of Matidia which shows PIETAS AVG with two small figures, which Strack interpreted as Matidia with the small figures of Hadrian and Sabina (Matidia was Sabina's mother),<sup>21</sup> though Mattingly was hesitant.<sup>22</sup> He pointed out the similar design on coins of MATIDIA AVG dating from earlier in the reign (*BMC* 531). However, the presence of two children is normal with representations of Pietas, occurring for instance on the coinage of Sabina (*BMC* 1875), where it can have no meaning about children, as she was of course childless.

When we look at the late coinage of Trajan from Alexandria (below, appendix), we similarly find no hint of Hadrian or his adoption.<sup>23</sup>

Thus we can conclude that, while the evidence in favor of the Hadrian Caesar *aurei* is reasonably good, the two coins are part of the coinage and indeed there is no other form of numismatic evidence for Hadrian's adoption before Trajan's death. We can therefore be reasonably sure that, while there is some good evidence for Hadrian's adoption before Trajan's death, we cannot in any way see it as part of a concerted plan. It is a one-off, almost, indeed, an afterthought, or even the product of a panicked reaction to the news of what had happened further east.

### MINT OF ROME: EARLY COINAGE OF HADRIAN

The mint of Rome moved rapidly in late 117 through three main different inscriptions for Hadrian, carried over from obverse to reverse, as set out by Mattingly<sup>24</sup> and Strack:<sup>25</sup>

IMP CAES TRAIAN HADRIAN(O) OPT AVG GER DAC/PARTHIC DIVI  
TRAIAN AVG F P M TR P COS P P (*BMC* 1–16; Strack 1–7; *RIC* 2–8)

IMP CAES TRAIAN HADRIANO AVG DIVI TRA(/) PARTH F (/) DIVI NER  
NEP P M TR P COS (*BMC* 17–35; Strack 13–20; *RIC* 9–16)

IMP CAESAR TRAIAN HADRIANVS AVG/P M TR P COS DES II (*BMC*  
36–42; Strack 26–31; *RIC* 17–22).

21. Strack, *op. cit.*, p. 201, no. 870. For the coins, see *BMC* Trajan 659–64.

22. *BMC* p. lxxxiii.

23. The only possibility might be the presence of Elpis in years 19–20; but Elpis is a generic design appearing earlier in Trajan's reign. Moreover, there are plenty of emperor designs in year 19, and it would have been very easy to add an additional reference to a new imperial figure, had it been relevant.

24. p. cxiv–cxv. Mattingly divides them into 4 groups but 2 and 3 are variants.

25. 3–4.

This sequence of obverse inscriptions was dated by Mattingly to August-September; September-October and November-December, but these are just of course guesses within the limits of August-December. Strack opted for slightly different dates. The first two inscriptions acknowledge Hadrian's place as the adoptive son of the deified Trajan so imply that Trajan's deification took place straightaway, and before it was even known at Rome exactly which titles Hadrian would use (the inappropriate use of OPT, GER, DAC, PARTH, and P P for Hadrian in the first inscriptions carried over from Trajan's titles), a gain indicating a lack of preparation for Hadrian's accession.

When considering the earliest coinage of Hadrian, we should not forget the rare coins attributed to 'the east', best treated by Strack,<sup>26</sup> whose discussion was followed by Mattingly.<sup>27</sup> A certain amount of scepticism has been expressed about the attribution of these coins,<sup>28</sup> but the attribution of the first group, of *denarii* and very rare *aurei*, to Syria (and probably Antioch) at the beginning of the reign, seems plausible in view of stylistic comparisons with Antioch silver.<sup>29</sup> Some of this group date to 119 since they refer to Hadrian's third tribunician power (Strack 9-11, *BMC* 1022-23);<sup>30</sup> others refer to his second and third consulships of 118 and 119 (Strack 5; 5a-11, *BMC* 1022-23), but some seem to date from the very beginning of the reign and refer to the ADOPTIO, as at Rome (Strack 1-4, *BMC* 1021). They too sometimes have an incorrect legend taken over from Trajan: IMP CAES TRAIAN HADRIANO OPT AVG GER DAC/ PARTHIC DIVI TRAIAN AVG F PM TRP COSS P P, the same as the first legend of Hadrian at Rome.<sup>31</sup> The fact that both mints have this incorrect form underlies the lack of preparedness for Hadrian's accession. This is all the more telling in the case of Antioch, given its proximity to Trajan and Hadrian.

### MINT OF ROME: GOLD COINAGE OF THE DEIFIED TRAJAN

The discussion of the early inscriptions used by Hadrian at Rome shows the lack of readiness for his accession. The inscriptions which were used also throw light on the coinage of gold *aurei* Hadrian made in the name of the deified Trajan and other family members at Rome.

26. Pp. 192-6.

27. *BMC* III, pp. cxii, cliii-vi. P. V. Hill, "The *aurei* and *denarii* of Hadrian from eastern mints," *Numismatic Chronicle* 1966, pp. 135-43, does not consider these coins.

28. R. A. G. Carson, *Coins of the Roman Empire* (Cambridge, 1990), p. 44.

29. See, e.g., W. E. Metcalf, *The cistophori of Hadrian* (Numismatic Studies 15, New York, 1980), pp. 150-1. The attribution is not always clear: *BMC* 1024 is probably just an imitation, while *BMC* 1025 looks much like coins from Rome.

30. I agree that it is likely that he renewed his tribunician power on 10 December: see, e.g., R. Birley, *op. cit.*, p. 325, note 14.

31. Strack 1, *BMC* 1021

There are two groups of gold coins in the name of and depicting the deified Trajan (there is no silver or bronze). The first consists of double headed coins for Hadrian and the deified Trajan. There are two different obverse inscriptions for Hadrian, each of which has its own variant or variants for Trajan on the reverse:

IMP CAES TRAIAN HADRIANO OPT AVG G<sup>32</sup> D PART; laureate, draped and cuirassed bust of Hadrian r.

DIVO TRAIANO PATRI; laureate, draped and cuirassed bust of Trajan r. (seen half from rear) (*BMC*–, Strack 9; *RIC* 23)

DIVO TRAIANO PATRI AVG; as before (*BMC* 44–46, Strack 10–11; *RIC* 24) (Pl. 96, 7)

IMP CAES TRAIANO HADRIANO AVG P M TR P COS; laureate, draped and cuirassed bust of Hadrian r.

DIVO TRAIANO PART AVG PATRI; laureate, draped and cuirassed bust of Trajan r. (seen half from rear) (*BMC* 43; *RIC* 25) (Pl. 96, 8)

The former (*BMC* 44–46) is an abbreviated version of the first obverse inscription used on Hadrian's own coinage, with the inappropriate use of Trajan's titles for Hadrian: IMP CAES TRAIAN HADRIAN(O) OPT AVG GER DAC/PARTHIC DIVI TRAIAN AVG F P M TR P COS P P. There are also some coins of deified Trajan/Plotina with the same inscription for Trajan (*BMC* 51; Strack 12; *RIC* 30), and a die for Plotina is also used with an obverse of Hadrian of this group;<sup>33</sup> the same die is also used for the Plotina/Matidia coin in the BM, again suggesting contemporaneity.<sup>34</sup>

The second (*BMC* 43) is a version of the second obverse inscription used on Hadrian's own coinage, with the removal of the inappropriate titles but the continuing retention of the dative case from Trajan's own reign: IMP CAES TRAIAN HADRIANO AVG DIVI TRA/PARTH F DIVI NER NEP P M TR P COS.

There are no coins for Hadrian and the deified Trajan corresponding to the latest version of Hadrian's inscription for the end of 117, with *cos des ii* (which might have been omitted due to lack of space) or (and so more importantly) the nominative case.

Thus the coins of Hadrian/deified Trajan were struck from August to, say, October (accepting Mattingly's guessed chronology as a working hypothesis), but no later. Some coins of deified Trajan/Plotina also date to the latter part of this period.

32. Sometimes GER: see *BMC* p. 244, no. 45n; *Numismatica Ars Classica* 33 (2006) lot 482.

33. Paris 584 (= *BMC* p. 47.13) and *BMC* 51.

34. *BMC* 51 and 53.

The coins in the name of the deified Trajan on his own (*BMC* 47–49) have *DIVO TRAIANO PARTH AVG PATRI*, as do some of the coins of the deified Trajan with Plotina (*BMC* 50, Strack 21). This is a variation (*PARTH* not *PART*) from the second group of coins in the name of Hadrian/deified Trajan, and so they might possibly date from a bit later, though not necessarily so (they retain the dative case, which was dropped for Hadrian at this stage).

We can conclude that at Rome Trajan's deification was recognized as soon as the mint began to mint coins in Hadrian's name, and that all the coinage for the deified Trajan with Hadrian, and some with Plotina, was made well before the end of 117, perhaps by the end of October. Other coins of the deified Trajan on his own (with reverses of a triumphal chariot or a phoenix) and with Plotina may possibly have been made a bit later, but presumably still within 117.

One of the coins of the deified Trajan on his own has the triumphal reverse *TRIVMPHVS PARTHICUS* (*BMC* 47) (Pl. 96, 9), referring to the posthumous triumph for Trajan, which Mattingly thought was held in 118, but Strack has pointed out that it was probably held in September or October 117.<sup>35</sup>

So we can conclude that all the Rome-mint *aurei* for the deified Trajan were probably minted in August–October 117. Minting such coins at the very beginning of the reign makes good sense as a way of legitimizing Hadrian's position, together with the common reverse designs which show his *ADOPTIO* by Trajan, and the other family designs (Plotina, Matidia). But clearly, within a few weeks of his succession, Hadrian felt that any need to justify his position in this way was superfluous.

### MINT OF ALEXANDRIA: EARLY COINAGE OF HADRIAN

In his discussion of the aureus of Trajan and Hadrian Caesar, Strack referred to a relevant billon coin from Alexandria,<sup>36</sup> and indeed at Alexandria we find some very rare tetradrachms for Hadrian with Trajan, who is sometimes deified. Milne, in his catalogue of the Alexandrian coins in Oxford, knew about these coins and thought, presumably following the precise sense of the inscriptions used for Trajan, that we should think that one variety was made before, and one after his deification.<sup>37</sup> The discussion of the mint of Rome makes this interpretation highly unlikely, since it would imply a clear gap after Hadrian's acclamation as emperor and his deification of Trajan.

I want now to turn to Alexandria to examine these coins, but once again we need first to look at the sequence of the early coins in Hadrian's name. Coins were made in good numbers for Trajan in his Alexandrian year 20 (AD 116/7: see also

35. Mattingly, *BMC* p. cxv, cf. cxxvii, Strack 54.

36. 231.

37. J. G. Milne, *Catalogue of Alexandrian coins* (Oxford, 1971), p. xxxvii.

appendix for the designs used), but there is no way of telling, apart from the large scale of production, how late in the year it went. However, there is no reason to suppose that it stopped significantly before his death.

There is no trace of 'Hadrian Caesar' at Alexandria, as mentioned above (see Appendix, for the designs used).

There is no coinage for Hadrian dated to his Alexandrian year 1 (11–28 August 117).<sup>38</sup> We don't know if that means that no coinage was made then at all (which is quite possible, as there had been many breaks in Trajan's Alexandrian coinage earlier in the reign) or whether coinage continued to be made for Trajan for a few days after his death before his death became known in Egypt.

When we turn to the coinage dated to Hadrian's year 2, the year which started on 29 August 117, we find a rather curious pattern and phasing. We can break the coins down into three main phases:

1. The first coins have the obverse inscription

ΑΥΤ ΚΑΙ ΤΡΑΙ ΑΔΡΙΑΝΟC ΑΡΙ CΕΒ ΓΕΡ ΔΑΚ ΠΑΡ; laureate head of Hadrian r.

This is known on only a very few, rare tetradrachms, and I have so far managed to record only three specimens with two reverse designs: Tyche standing l. with rudder and cornucopia (Oxford = Milne 817, Athens 137/273 = Pl. 97, 11); and Agathodaemon snake r., with caduceus and corn ear (Paris, Bakhoun 1323: the obv. inscription is misread by Bakhoun).

This reminds us of the first inscription used at the mints of Rome and Antioch IMP CAES TRAIAN HADRIAN(O) OPT AVG GER DAC/PARTHIC DIVI TRAIAN AVG F P M TR P COS P P, where Hadrian is also erroneously given Trajan's titles. Indeed, although the inscription is in the nominative case rather than the dative, I suspect that it may well even have been copied from early Rome *aurei* (see also below), or possibly *denarii* from Antioch.<sup>39</sup> Anyway, as at Rome and Antioch, the mint of Alexandria was not at first correctly informed about Hadrian's titles; and even by the last days of August or early September, more than 3 weeks after Trajan's death, it still did not know what to call him.

2. We then have the concurrent use of three variant obverse inscriptions

ΑΥΤ ΚΑΙC ΤΡΑΙΑΝΟC ΑΔΡΙΑΝΟC; laureate bust of Hadrian, drapery on l. shoulder;

as last, but variant with spelling ΤΡΑΙΝΟC (Pl. 97, 11);

as last, but variant with spelling ΤΡΙΑΝΟC.

38. A coin in Paris (1440 = Bakhoun 1537) which looks like year A is actually [LI] A, as the obverse and reverse designs show.

39. Of course the nominative was normal at Alexandria for the end of Trajan's reign so a reformulation of the inscription from the dative to the nominative would perhaps not be surprising.

Coins with these obverses are well attested, and, as well as tetradrachms, three denominations of bronzes are so far known (33 mm, 30 mm, and 26 mm). Some of the bronzes show the emperor in a triumphal or elephant chariot, and it might be tempting to see these also as a reference to Trajan's posthumous Parthian triumph recorded on the *aurei* from Rome mentioned above; but, in fact, these are generic designs used for some time on the bronzes of the end of Trajan's own reign and so not significant here.

There are two characteristics of this group of coins. The first is the absence of the title CEB(ACTOC). I can only assume that it was dropped with the removal of Trajan's other specific titles, and suggests that though the mint engravers realized or were informed that Trajan's titles were inappropriate, the officials were not yet sure if he had been proclaimed Augustus.

The second and more strange characteristic of this phase of coinage is the inability of the mint to spell the name *Traianos* correctly, despite having got it correct for over 20 years in Trajan's own reign! *Trainos* occurs reasonably frequently, though *Trianos* is rather more unusual. It is hard to think of any convincing explanation. My first thought was that the mint officials did not realize that Hadrian had adopted his predecessor's name and thought it was some other name. A search of the on-line Lexicon Greek Personal Names, for example, reveals some names which end -trianos (Antipatrianos, Dextrianos, Demetrianos and Castrianos), though nothing for -trainos or -tranos. The excellent reverse legend index by Münsterberg offers only Demetrianos, and nothing for either -trainos or -tranos.<sup>40</sup>

Another possibility, perhaps, is a confusion engendered by the spelling of Hadrian's own name: but while its ending -rianos might perhaps have brought about *Trianos*, it is hard to see how we can explain *Trainos* or *Tranos* (see below for the latter), unless the engravers just became over-confused as a result of the initial confusion with -rianos in Hadrianos.

However the fact that we seem to have the same mistake in the spelling of some of the posthumous coins of Trajan (see below) makes the hypothesis of confusion seem the most likely.

3. The next phase consists of coins with much the same variant inscriptions but with the addition of the title CEB(ACTOC)  
 AYT KAIC TPAIANOC AΔPIANOC CEB; laureate bust of Hadrian, drapery on l. shoulder;  
 as last, but variant with TPIANOC (Pl. 97, 12);  
 as last, but very rare variant with TPANOC;  
 as last but very rare variant with TPAINOC.

40. R. Münsterberg, *Die Beamtennamen auf den griechischen Münzen* (Vienna 1911–1927).



The tetradrachms of this phase fall into two groups: some have the presence of a star—of uncertain significance—on the obverse, but others do not. It is perhaps tempting to think that the coins without and with star can be divided into two chronological phases, but this cannot be correct since at the beginning of the next year (year 3) we find coins both with and without the star. In year 3, we find that the mint consistently spells the inscription correctly ΑΥΤ ΚΑΙC ΤΡΑΙΑΝΟC ΑΔΡΙΑΝΟC CΕΒ, so presumably the transition to the correct spelling had taken place before the end of year 2, but we can only guess when. The same inscription continues from year 3 into year 4, though with no accompanying star. It is then replaced, later in year 4, by the new obverse inscription ΑΥΤ ΚΑΙ ΤΡΑΙ - ΑΔΡΙΑ CΕΒ, which continues for several years.

The bronzes of this phase never have a star on the obverse but that is probably of little or no chronological significance, since the Alexandria mint is by no means consistent on other occasions between the silver and bronze coinage. But, like the tetradrachms, the bronzes of year 3 spell the name correctly.

We have no reliable way of ascribing real dates to the different phases of year 2. We don't know if there were any periods without minting—clearly the case at other times—and we cannot assume that survival rates reflect length of minting period: in fact we know that they do not since it is clear from other periods that survival rates reflect mint productivity. That said, however, we can reasonably assume that the first phase, known from only three coins, was very short. We might perhaps also guess that all the coinage of phase 3 falls in 118—it leads straight on to the coinage of year 3 which starts in late August 118.

The inscription used in the third phase of year 2 ΑΥΤ ΚΑΙC ΤΡΑΙΑΝΟC ΑΔΡΙΑΝΟC CΕΒ might perhaps also be a copy of the Rome-mint inscription IMP CAESAR TRAIAN HADRIANVS AVG, which was adopted in very late 117 and was current for some time thereafter. If so, that would (marginally) help the dating of phase 3 to 118, rather than late 117.

### MINT OF ALEXANDRIA: COINAGE OF POSTHUMOUS TRAJAN

Coinage in the name of deified emperors is very rare at Alexandria. Only Augustus appears as a standard reverse design, on tetradrachms of Tiberius, and later (with posthumous portraits of Tiberius) on the late coinage of Nero, to mark the removal from circulation of the earlier coins of Tiberius and Augustus from Tiberius' reign.<sup>41</sup> We have no Alexandrian coinage for the deified Claudius, Vespasian, Titus or Nerva, all of whom are known from Rome and elsewhere. Thus, although the coinage commemorating Trajan from the beginning of Hadrian's reign is very rare indeed, and much rarer than the *aurei* of Rome, it is a surprise that it exists at all.

41. *RPC* 1, 5089–5105 (reign of Tiberius), 5294 (reign of Nero: AD 66/7). For discussion of the Neronian coins, see *RPC* 1, p. 709.

I know of only 4 tetradrachms and the present whereabouts of 2 (from the Dattari collection) is uncertain.<sup>42</sup> The coins are all dated to year 2.<sup>43</sup> The specimens I have managed to track down fall into two varieties, as follows:

1. ΑΥΤ ΚΑΙC ΤΡΙΑΝΟC ΑΔΡΙΑΝΟC CΕΒ; laureate bust of Hadrian, drapery on l. shoulder; star in r. field  
ΑΥΤ ΤΡΙΑΝ ΑΡΙ CΕ ΓΕΡΜ ΔΑΚΙΚ ΠΑ; laureate head of Trajan, with aegis, r.; in field, L B  
a. Berlin 28884 (Pl. 97, 13). The obv. inscription could possibly be read ΑΥΤ ΚΑΙC ΤΡΙΑΝΟC ΑΔΡΙΑΝΟC CΕΒ. However, although the letters are confused at the beginning of *traianos*, I think that the strictly correct reading would be *trianos*. At the same time the letters are not clearly cut, and I am tempted to think that the die engraver may have realized his mistake and tried to correct it on the die.
2. ΑΥΤ ΚΑΙC ΤΡΙΑΝΟC ΑΔΡΙΑΝΟC CΕΒ; laureate bust of Hadrian, drapery on l. shoulder; star in r. field  
ΘΕΟ ΤΡΙΑΝΟC CΕΒΑCΤΟC ΠΑΤ ΚΥ; laureate head of Trajan, r.; in field, L B  
b–c. Athens 6720 (Pl. 97, 14). Dattari DS<sup>44</sup> 1246–47 (Pl. 97, 15–16). It seems quite possible that all three coins are from the same dies. It is hard to be sure because of the quality of the rubbings in DS; at any rate the Athens coin and DS 1247 seem very likely to be die duplicates.<sup>45</sup>

The inscriptions are not easy to read, and in particular, the word *theos* is not absolutely certain—though I think very likely from DS 1246. The Ε and the Ο seem

42. The coins are very rare: no specimens in London, Paris or New York, for example (to name only 3 of the most important collections of Alexandrian coins).

43. There are also some (erroneous, in my view) descriptions of other coins as depicting Trajan in Hadrian's year 8: Dattari, *Numi Augg. Alexandrini. Catalogo della collezione G. Dattari compilato dal proprietario* (Cairo, 1901) no. 1248, describes a coin as having a bust of Trajan with lion-skin, but the coin is worn and the identification as Trajan seems a misidentification of Heracles, who clearly appears on other coins of the same year, the group with aegis, e.g. K. A. Geissen, *Katalog Alexandrinischer Kaisermünzen der Sammlung des Instituts für Altertumskunde der Universität zu Köln Band II: Hadrian-Antoninus Pius* (Opladen, 1978), no. 854. Another specimen is recorded by Curtis 542 ("Trajan bust r., wears lion-skin, which hangs to shoulders, i.f. L H (extremely rare).") The Curtis coin is described as being in good condition so his identification of the head as Trajan presumably derives from Dattari.

44. DS = *Catalogo Completo della Collezione Dattari. Numi Augg. Alexandrini*, ed. A. Savio (Trieste, 1999), the invaluable publication of pencil rubbings of Dattari's coins.

45. The Athens coin and Dattari 1247 are very similar and this similarity might perhaps prompt the notion that they are actually the die duplicates. However, the obverses are different, especially at 6–7 o'clock; sufficiently so, that I am sure they are two different coins.

very likely and the Θ is possible. Dattari thought he could also read ΘΕΟ on DS 1247. It is possible that with the real coin (rather than the rubbing) this would be possible to see. However Dattari does make mistakes: for example it seems clear here that we have TPIANOC rather than TPAIANOC (although, again, one cannot be absolutely certain as the first A would be where the wreath ties fall).

Secondly, the letters KY at the end of the inscription are not certain. However, Dattari read the end of the inscription as KY on both DS 1246 and 1247 (though not obvious on the rubbings), and they seem very probable on the Athens coin.<sup>46</sup> What we can see is:

DS 1246	ΘΕΟ ΤΡΙΑΝΟC[
DS 1247	ΘΕΟ ΤΡΙΑΝΟC CΕΒΑCΤΟC[
Athens	]ΙΑΝΟC CΕΒΑCΤΟC ΠΑΤ ΚΥ

The obverses of all four of the coins are essentially the same, but the reverses fall into two different varieties. The latest tetradrachms of Trajan's own reign have ΑΥΤ ΤΡΙΑΝ ΑΠΙ CΕΒ ΓΕΡΜ ΔΑΚΙΚ ΠΑΡ (radiate head of Trajan r. with aegis r.; star to r.), so the inscription and bust (with aegis) for Trajan on 1 seem clearly to be based on this, but curiously modified by the shortening of some abbreviations (which would not seem necessary to save space, given that the inscriptions are essentially the same).

The inscription on the three coins of variety 2 for Divus Trajan is composed of different elements and the curious ending, if correctly read (see above), has been plausibly interpreted at least since Vogt as standing for ΠΑΤ ΚΥ(ΡΙΟΥ); according to him this is the first use of the term on coins although it is common on papyri and inscriptions.<sup>47</sup> We would render this in Latin as Divus Traianus Augustus Pater Domini and I wonder if this is not in fact a somewhat free translation of the inscription we found earlier on Roman *aurei*: DIVO TRAIANO PATRI AVG. If so, and admittedly it is not a very strong hypothesis, then it would strengthen the notion of the derivation of inscriptions on Alexandrian coins from those used at Rome.<sup>48</sup>

46. The only other possibility would be ΠΑ (for ΠΑΤΡΙΔΟC), but it is clearly not that.

47. J. Vogt, *Die Alexandrinischen Münzen* (Stuttgart, 1924) p. 96 n. 516. W. Leschhorn, P. R. Franke, *Lexikon der Aufschriften auf griechischen Münzen* (Vienna, 2002), pp. 182–3, cite other (rare) instances on coins. Apart from the Alexandrian coins of Trajan (which Leschhorn and Franke cite twice on subsequent pages), the earliest is in Mesopotamia for Marcus Aurelius and Lucius Verus in 161–9; other instances, typically in Thrace, Moesia, Bithynia or Pontus—presumably some sort of local fashion—occur later, under the Severans and in the third century. The Latin equivalent *dominus* occurs only once before the fourth century, at Antioch in Pisidia from the Severan period (Leschhorn and Franke, p. 343).

48. The close reliance on Rome for obverse inscriptions can be seen clearly at the beginnings of the reigns of Nerva and Trajan: IMP NERVA CAES AVG P M TR P COS II P P ... is copied by ΑΥΤ ΝΕΡΟΥΑΣ ΚΑΙΣ ΣΕΒ; and IMP CAES NERVA TRAIAN AVG GERM by ΑΥΤ ΚΑΙΣ ΝΕΡ - ΤΡΙΑΝ ΣΕΒ ΓΕΡΜ.

All coins have the same obverse inscription with CEBACTOC and bust, and all belong to the group of coins made in year 2 with that inscription and with a star in the obverse field. That is they belong to the third and latest phase of the coinage of year 2. In the preceding discussion I guessed that this probably means a date in 118, and certainly before 29 August 118. So we can reasonably say that the posthumous coins of Trajan from Alexandria probably date to sometime in the first two-thirds of 118. Thus they can have no connection with the issue of *aurei* for the deified Trajan at Rome, which, as we have seen, were probably made at least a couple of months earlier.

This makes it very hard to explain their existence. As we have seen, the moment for Hadrian to stress his close connections with Trajan was earlier, in late 117. Secondly, the equivocation in Trajan's titulature (on one variety he is deified, on the other not), like the spelling mistake in the adoptive name for Hadrian, the sudden and unexpected use of the title KYPIOC, all indicate a very surprising lack of organisation at the mint. What was going on? It may be the case, for example, that someone at Alexandria simply became aware that there were posthumous coins of Trajan from Rome, and felt that something similar should have to be produced at Alexandria, even though the moment had really passed.

### CONCLUSION

The results of this investigation do not contribute to a picture of a stable, well-organised empire in the 'golden years' of the second century! Whether from vanity or carelessness, Trajan's lack of preparation for his succession might well have precipitated a much more serious crisis. And the crisis of his illness, when it came, found the empire unready. A rushed adoption of Hadrian caught everyone unaware, and a few coins were quickly put out with a questionable form of his name. Days later, when news of Trajan's death followed, the mints had only a confused idea of what to call him, and for weeks or perhaps even months Rome, Antioch (?) and Alexandria all put out coins inappropriately giving him Trajan's titles Optimus, Germanicus, Dacicus, Parthicus and Pater Patriae. The muddle was compounded by the mint of Alexandria's extraordinary failure to spell Hadrian's adoptive name correctly—what did they think they were doing?!—and their hesitant and poor judgment in putting out a few, strange posthumous coins for Trajan. Luckily for all, Hadrian was a decisive man, as we can see most vividly in his instant decision to withdraw the army from Iraq. He soon corrected his own titulature at Rome and put out a short series of *aurei*—no doubt as a donative or bribe—reminding everyone of his connection with Trajan and his family. But as he rapidly and confidently grasped the reins of power, the moment quickly passed, even though it took some months to sort out the muddle in the mint of Alexandria. Rarely do official documents like coins let us have this sort of glimpse of the uncertainties and mistakes

in the administration of one of the world's greatest empires—it is as if we had been able to make a Freedom of Information request to see the papers relating to the transfer of power from Tony Blair to Gordon Brown, certainly an altogether better planned affair.....

#### APPENDIX

Designs used on Trajan's coinage of Alexandria, years 19 (115/6) and 20 (116/7), and Hadrian's year 2 (117/8)<sup>49</sup>

	T. Year 19	T. Year 20	H. Year 2
Silver	Dikaiosyne	Dikaiosyne	Dikaiosyne
	Nilus head	Nilus head	Nilus head
			Nilus reclining
	Sarapis head	Sarapis head	Sarapis head
			Sarapis seated
	Zeus head	Zeus head	Zeus head
		EIRENE	
		Canopus	Canopus
			Tyche
			Agathodaemon snake
Bronze			Apis bull
			Eagle
			Harpocrates
			Alexandria head
			Ammon head
			Helios head
			Hermes head
			Isis head
			Roma head
		Ares	Ares
		Athena	
	Ares and Athena	Ares and Athena	

49. I do not cite authority for these coins here, as that is for *RPC* 3. Further discussion will be given there.

T. Year 19	T. Year 20	H. Year 2
?Dikaiosyne		
Dionysus in biga	Dionysus in biga	
ELPIS SEBASTE	ELPIS SEBASTE	
Emperor and Alexandria		
Emperor standing		
Athena or Ares and Emperor		
Euthenia	Euthenia	Euthenia
Nike	?Nike	
		Nike head
Nilus	Nilus	Nilus
Tyche	Tyche	Tyche
Zeus seated	Zeus seated	
	Zeus standing	
Zeus on eagle	Zeus on eagle	
	Triumphal arch	
	Emperor in quadriga	Emperor in quadriga
	Emperor in elephant quadriga	Emperor in elephant quadriga
	Emperor in biga of centaurs	
	Emperor on horse	
	Harpocrates of Mendes	
	Isis Pharia and ?Euthenia	
	Temple enclosing Sarapis	Temple enclosing Sarapis
	Temple enclosing 3 (?Sarapis, ?Isis and Sarapis)	
		Shrine of ?Harpocrates
		Ammon head
		?Homonoia



## Tarsos, Aboukir, etc.; before and after. Once again

PLATES 98–99

IOANNIS TOURATSOGLOU\*

This article considers the third century AD gold medallions from Tarsos in Cilicia and Aboukir in Egypt, suggesting they served as *donativa* to high ranking officials not as ‘prizes’ to victors in games. The author also considers possible places of production, including Rome, and the circumstances of the burial of the hoards in which the medallions were found.

Tyche, the Greek goddess of fortune, protectress of archaeology, was no doubt present and active in the case of the discovery of two of the most sensational treasure hoards ever, one on the outskirts of Tarsos, Cilicia in 1853, during work to dig up some stones from a building that is believed to date to the Roman period: the other at Aboukir on the outskirts of Ptolemaic Alexandria, in March or April 1902, “by a woodcutter working next to the ruins of the Roman wall.”

The first find at Tarsos comprised three weighty gold medallions with representations from the life of Alexander the Great and his family, a large diameter gold commemorative medallion of Severus Alexander to mark the *Decennalia* in AD 230, twenty-three *aurei* from the time of the latter (the last from the reign of Gordian III), and pieces of jewelry. The second find at Aboukir consisted of eighteen gold medallions with similar iconographic subjects, six hundred gold coins (most of which were struck in the reigns of Diocletian, Maximian, and Constantius I Chlorus), and eighteen or twenty stamped gold ingots.

\*Hon. Director of the Numismatic Museum, Athens.



The medallions of Tarsos and the gold medallion commemorating the *Decennalia* of Severus Alexander, were purchased during the reign of Napoleon III for the Cabinet des Médailles of the Bibliothèque Nationale (then Impériale) in Paris from the distinguished collector Count Michel Tyszkiewicz. The twenty-three gold *aurei* also ended up at the same French institution, eleven of which were acquired by exchange from the art dealers Rollin and Feuardent. In contrast, the jewellery remained in Egypt in the possession of Giovanni de D1emetrio, a celebrated silver merchant of the time. The relevant details can be found in the well-documented article by Longpérier in 1868.<sup>1</sup>

The fate of the Aboukir find was quite different. Despite the leading role played by members of the Greek community of Alexandria, (P. Kytikas, the widow of K. Synadinos, the antiquities dealer widow of Vingas), and distinguished foreign residents (the physician Eddé), into whose possession most of the medallions passed immediately after appearing in the local market, the rest, together with the gold coins and the stamped gold ingots found their way to western Europe.

The authenticity of the medallions was strongly contested by a host of scholars including the well-known Italian numismatist and collector Giovanni Dattari, who was the leader of the crusade, and, after a first assessment, the famous Ioannis Svoronos. Eventually not only those medallions which had remained in private hands in Egypt, but also those spirited away by the well-known Armenian adventurer and merchant Mihran Sivadjian were offered for sale at exorbitant prices to the Museums of Paris, London and Berlin, and ended up in Lisbon and Berlin and Baltimore. In the 1960s, the Greek state participated in an international auction and was fortunate to acquire one of the medallions which today graces the Archaeological Museum of Thessaloniki. The gold ingots have since the early twentieth century remained at the British Museum. The relevant information about the initial comings and goings of the medallions is provided by Arvanitakis and Dressel.<sup>2</sup>

\*\*\*\*

According to the most widely accepted view, the Tarsos medallions were struck between AD 218/222 and 235 as victory medals for the games of the *koinon* of the Macedonians in Beroia, Macedonia.<sup>3</sup> In the view of most researchers, their

1. A. de Longpérier, "Trésor de Tarse," *Revue Numismatique* (1868), 309–336.

2. G. D. Arvanitakis, *Ο θησαυρός του Αμπουκίρ, Ελλήνιον (Δελτίον του εν Καίρω ελληνικού Επιστημονικού Συλλόγου)* (1903), 247–268; H. Dressel, *Fünf Goldmedaillons aus dem Fund von Abukir* (Berlin, 1906).

3. Cf. K. Dahmen, *The Legend of Alexander the Great on Greek and Roman Coins* (London/New York, 2007), 144–145. Dahmen (this volume) argues that the medallions were gifts presented by the Agonotetes and Makedoniarchos to high ranking visitors on the occa-

more numerous 'relatives,' as they have been described, from Aboukir in Egypt,<sup>4</sup> date to a similar period, which in this case extends to the reign of Philip the Arab (AD 244–249), and were issued for the same reason.<sup>5</sup> However, both Lenormant and Babelon considered it more likely that the Tarsos group were talismans, while Savio extended the scepticism to the Aboukir *niketeria* (1994/1995, 100).<sup>6</sup>

One might also put forward their commemorative, festal aspect, almost always in connection with the life and times of the great Macedonian military commander;<sup>7</sup> a view which may be reinforced by analogy with the later issue of Contorniates (*nummi contorniati*) in the fourth/fifth century with more or less the same iconographic subjects, either inspired by or in imitation of those that appear on the third-century gold medallions.<sup>8</sup> This series, most probably also commemorative along with successive issues (AD 350–425),<sup>9</sup> is associated with the ideals held by the aristocracy of post-Constantine Rome and constitutes a final reference to the values of a gradually disappearing past.<sup>10</sup>

Following the first publications of the gold medallions from the first two finds,<sup>11</sup> the corpus was enriched by the publication of a small number of speci-

sion of these games. See Dahmen, "Alexander in Gold and Silver Reassessing third century medallions from Aboukir, Tarsos, and Related objects," *American Journal of Numismatics* 20 (2008), 493–546.

4. Dressel (1906); cf. also Dahmen (2007, 148 ff).

5. Cf. E. T. Newell, "The Gold Medallions of Aboukir," *American Journal of Numismatics* 44 (1910), 130.

6. F. Lenormant, *La monnaie dans l'antiquité* 1877–1879, I, 39–43; E. Babelon, *Traité des monnaies grecques et romaines* (Paris, 1901), I/I, col. 681–684; and A. Savio, "Intorno ai medaglioni talismanici di Tarso e di Aboukir," *Rivista Italiana di Numismatica* (1994/1995), 73–100.

7. Cf. I. Touratsoglou, *Die Münzstätte von Thessaloniki in der römischen Kaiserzeit (32/31 v. Chr. bis 268 n. Chr.)* (Berlin, 1988), 70, n. 147; A. Stewart, *Faces of Power* (Oxford, 1993), 50.

8. A. Alföldi and El. Alföldi, *Die Kontorniat-Medaillons* (Berlin, 1990).

9. Cf. Dahmen (2007), 152–153.

10. Indeed, Stewart observed that the year AD 344 coincides with the seven hundredth anniversary of Alexander's birth. See "Alexander in Greek and Roman Art," in *Brill's Companion to Alexander the Great*, ed. J. Roisman (Leiden/Boston, 2003), 65–66.

11. For the Tarsos find: Longpérier (1868, 309 ff) and R. Mowat, "Les médaillons grecs du trésor de Tarse et les monnaies de bronze de la communauté macédonienne," *Revue Numismatique* (1903), 120–129. For the Aboukir find: Arvanitakis (1903) and Dressel (1906). Cf. Cl. Bernardi, "I *niketeria*," *Rivista Italiana di Numismatica* (1970), 79–90, pl. I–VII. A problem arises however with regard to the uniface (the reverse is a blank disc-like sheet) *niketerion* at the British Museum (inv. no. 1897-0305-11) from the Montagu Collection [Rollin & Feuadent, *Montagu Sale II* (1897)] bearing the diademed head of Alexander the Great to the right. Its provenance from the Tarsos treasure, as stated, is clearly not correct.

mens of the same category,<sup>12</sup> as well as with the disclosure of cases of the exact and/or liberal rendering of the iconography of specific example on coin-like sheets which had generally been used as grave *danakes*.

The *niketeria* and the *danakes* with the same iconographic subjects, which have appeared or have been brought out of the darkness of museum storerooms after Tarsos and Aboukir, published and/or unpublished, authentic and/or modern imitations, are the following:

### *Niketeria*

N1. Gold *niketerion* fixed in gold hoop with attached ring, formerly in the possession of the Prokos family of Setta, Euboea, provenance unknown: Bust of Alexander to the left wearing an Attic crested helmet and armour (obverse), and Nike half-naked, standing and facing right, inscribing a shield on a stand with the word BA/nil/CIA/E (reverse). To the right and left of the representation, the legend AΛΞAN/ΔΠΟΥ. Diam.: 33 mm, Weight: 21.70 g. [E. Varoucha-Christodouloupoulou, *ADelt* 19 (1964), *Chronica* 15, pl. 4, 61–65; cf. also G. Daux, “Chroniques,” *Bulletin de Correspondance Hellénique* 88 (1964), 690; M. Jenkins, “The Euboea Niketerion,” *Athens Annals of Archaeology* 19 (1986), 114–118] (Pl. 98, no. 1).

N2. Gold *niketerion* with helmeted head of Athena facing left (obverse), and Alexander on a galloping horse, brandishing a spear and attacking a lion (reverse). Legend: AΛΞANΔΠΟC. Diam.: 36 mm, Weight: 21.41 g. Cambridge, from the Collection of W.M. Leake and likely provenance eastern Macedonia (purchased in a street market in Serres in the early part of the first decade of 1800) [W. M. Leake, *Numismata Hellenica, European Greece* (London, 1854), 64; *Sylloge Nummorum Graecorum IV, Fitzwilliam Museum: Leake and General Collections, Part III Macedonia-Acarnania* (1951), pl. XLIII, no. 2351; H. Gaebler, *Die antiken Münzen von Makedonia und Paionia*, AMNG (1906), pl. IV, 1. J. M. C. Toynbee, “Greek Imperial Medallions,” *Journal of Roman Studies* 34 (1944), pl. 3, 5; Savio (1994/1995), 90] (Pl. 98, no. 2).

N3. Rolled fragment of a gold *niketerion*, originating from Asia Minor: Bust of Athena Parthenos facing right (obverse), and four-horse chariot with Nike upright holding a palm branch (reverse). Legend [BACIAEΩC (?) A]AΛΞANΔΠO[Y]. [C. C. Vermeule, “Alexander the Great, the Emperor Severus Alexander and the Aboukir medallions,” *Schweizerische Numismatische Rundschau* 61 (1982), 71, pl. 8; *Alexander the Great conquers Rome. The Survival of the Alexander Myth in the Art of the Roman Empire* (Cambridge, Mass. 1986), 23, pl. 25ff.].

12. For the relevant earlier bibliography, see Savio (1994/1995), 73–100, pl. A-C.

N4. Gold *niketerion* with bare head of Alexander facing right (obverse), and wicker basket with conical lid (*cista mystica*), from which a snake emerges (reverse). Legend: ΟΛΥΜΠΙΑ ΔΟC [(Alexandrian) Olympic Games of the year 274 (-32/31 BC) = AD 242/243]. Weight: 2.36 g. [Sylloge Nummorum Graecorum. Great Britain V. Ashmolean Museum Oxford, Part III, Macedonia (London, 1976), no. 3311] (Pl. 98, no. 3).

The snake is most probably associated with the myth of the birth of Alexander<sup>13</sup> (Rizakis and Touratsoglou 1906) rather than with Pergamon (Vermeule 1982, 69ff.).

N5. Gold *niketerion* with bust of cuirassed, diademed Alexander facing right (obverse) and lion walking to the right (reverse). Legend: ΑΛΕΞΑΝΔΡΟΥ. Diam. 20 mm. [H. Gaebler (1906), 193, no. 876].

#### Modern imitations of *Niketeria*

F1. Modern imitation (nineteenth century?) of Tarsos-type *niketerion*. Helmeted head of Athena facing left (obverse) and Alexander on horseback facing right and attacking a lion with a spear (reverse). Legend: ΑΛΕΞΑΝΔΡΟΥ [Cf. W.M. Leake, *Numismata Hellenica, European Greece* (London, 1854), 64]. Gilded bronze Oxford, Ashmolean Museum, Forgeries coll., Christ Church. [Cf. Fr. De Callataj, "Athena pour Alexandre, Pégase pour Bucéphale: Les aventures métalliques d' Alexandre le Grand à la Renaissance," *Antike Kunst* 42 (1999), 110].

F2. Modern imitation (early twentieth century? 1960s?) of an Aboukir-type *niketerion*, from confiscation (before or in 1964). Free rendering of the representations of both sides (obverse and reverse) of the Dressel medallion U (presently in Lisbon). Cf. also Dahmen (2007, 152, no. 27.7; 2008, 493–546), Laureate head of Apollo facing left with laurel branch in the field (obverse) and depiction of Alexander seated and facing left with Nike standing in front of him offering a helmet and shield with device of Achilles slaying the Amazon queen Penthesilea. Legend: ΒΑΣΙΛΕΥC ΑΛΕΞΑΝΔΡΟΥ. Diam.: 40 mm. National Archaeological Museum, Athens. [Unpublished, possibly reproduced from a photograph. A second medallion from the same dies is recorded in the photo archive of Bank Leu (information kindly provided by Silvia Hurter) (Pl. 98, no. 4[Lisbon]–5[Athens]).

The same shield with this device is depicted on a Contorniate (Alföldi and Alföldi 1990, 111–112, pl. 22, 7–12 and 23, 1). The shield with ivory decoration from the so-called tomb of Philip II at Vergina raises a problem of attribution to a specific owner.<sup>14</sup>

13. See A. Rizakis and I. Touratsoglou, "Λατρείες στην Άνω Μακεδονία. Παράδοση και νεωτερισμοί," *Ancient Macedonia* VI/2 (1990), 957–958.

14. M. Andronikos, *Vergina* (Athens, 1984), fig. 93. With respect to this question, which

*Danakes*

D1. Gold uniface coin-like sheet from the inside of a marble sarcophagus dating to the second half of the second century AD in Thessaloniki (eastern necropolis) (The *danake* is from a later set of grave goods).

Free rendering in concave execution of the common reverse types of two medallions from the treasure of Tarsos in Cilicia (Mowat 1903, 2–3, no. a, pl. I and 3, no. b, pl. II; cf. Dahmen 2007, 146, no. 26.2A-B): Alexander on horseback facing right and attacking a lion with a spear. Legend: A-ΛE-ΞΑΝΔΡΟΥ. Diam.: 25 mm. Archaeological Museum of Thessaloniki, inv. no. MΘ 5685. [Cf. T. Stefanidou-Tiveriou, and P. Nigdelis, *Sarkophagenstudien*, DAI (Berlin, 2008), no. 143 for the inscribed sarcophagus] (Pl. 99, no. 6).

D2. Gold coin-like biface *danake* joined from two sheets, offering found in a child's cist grave in Beroia, Macedonia, with bare head of Alexander facing left (obverse) and half-open wicker basket (*cista mystica*) from which a snake emerges (reverse). Diam.: 22 mm. [I. Touratsoglou, *ADelt* 24, 1969, *Chronika* B, 313, pl. 328b] (Pl. 99, no. 7).

D3. Gold coin-like uniface sheet from a brick-lined grave with marble cover in Plato's Academy, Athens. In view of the four holes on the circumference, the sheet had clearly been stitched to some fabric as a decorative accessory. Diam.: 45 mm, Weight: 1.62 g. (Varoucha-Christodouloupoulou 1964, *Chronika* 15, pl. 4, 66; cf. F. Stavropoulos, *Praktika* (1963), 22, pl. 20a] (Pl. 99, no. 8).

Free rendering in concave execution of the Contorniate obverse of AD 350–425 with veiled bust of Olympias facing left and holding a sceptre (Alföldi and Alföldi 1990, 85–86; cf. also Dahmen 2007, 153, no. 28.1), rather than of the obverse of the Dressel medallion D (Dressel 1906; cf. also Dahmen 2007, 148, no. 26.5) from the Aboukir treasure.

should not be regarded as having been conclusively resolved, see O. Palagia, "Hephaestion's Pyre and the Royal Hunt of Alexander," in *Alexander the Great in Fact and Fiction*, eds. A. B. Bosworth, and E. J. Baynham (Oxford, 2000), 192. However, since the aforesaid Macedonian tomb had been built to receive, among others, also the corpse of Philip III Arrhidaeus (as many believe), then the valuable shield, part of Alexander's parade armor, must have belonged to the personal treasure of the royal family and transported by Alexander's half-brother from Babylon to Macedonia along with other gifts from Thracian and Scythian rulers (bow and quiver, pectoral, and etc.). Most certainly, copies of the shield would have existed for secondary uses from the outset—irrespective of the certainty of its depiction in large-scale painting works at the time the Macedonian was still alive or in the illuminations of storybooks.

\*\*\*\*

Both in the case of the coin-like imitations in the form of weighty medallions, undoubtedly modern creations, and to a lesser extent the uniface or biface sheet-like *danakes*, which generally speaking served as grave offerings in antiquity, the matter of reproductions is an unresolved numismatic enigma. In regard to the former case, which raises the most questions, it is known that casts of the Tarsos medallions had been made in lead, most probably by their first Armenian owner almost immediately after acquiring them, in order to be sent to France for the purpose of negotiating the sale of the originals. They were obviously negative casts of both sides in lead, from which positive cast copies may later have been reproduced in metal. "On en fit des surmoulés de plomb qui furent envoyés en France..." notes Longpérier in 1868. This was before they came into the possession of Count Michel Tyszkiewicz.

Apart from this special case of casts, all the gilded *niketeria*, such as the one with the helmeted head of Athena on the obverse, in Oxford (no. F1), or the obviously modern gold medallions, which have a different elemental analysis from the originals (as in the case of the Athens medallion, no. F2 above), were made either by private craftsmen who used their depictions in official publications as prototypes (Longpérier, Mowat, Arvanitakis, and Dressel), or on the instructions of their temporary Greek-Egyptian owners, so the latter could keep a tangible memory of the antiquities, which they would no longer possess. However, the possibility cannot be ruled out that renderings in silver, as a rule of smaller diameter than their gold counterparts and smaller ones in gold, both with iconographic subjects similar to the representations on the *niketeria* (Gaebler 1906, pl. IV), had already circulated in antiquity and were not solely creations of modern times. In this respect, it is worth noting that the Alexandrian Dattari mentions locals showing him a silver copy (or variation) of one of the Aboukir *niketeria*.

\*\*\*\*

Although the authenticity of the medallions from Tarsos and Aboukir, and particularly of the latter, had in the past been contested, as noted previously, and was the subject of great controversy in the early twentieth century,<sup>15</sup> their authenticity is no longer disputed by contemporary scholars. To the arguments in favor of their antiquity, apart from the fact that they share the iconography of the contemporary bronze coinage of the *koinon* of the Macedonians<sup>16</sup> and of Beroia as its metropolis

15. See in detail Savio (1994/1995).

16. H. Gaebler, *Die antiken Münzen von Makedonia und Paionia*. Erste Abteilung (Berlin 1906), 75ff. (Makedonia in der Kaiserzeit).

and center,<sup>17</sup> one should also add the fact that a number of bronze coins of the Thessaloniki mint, particularly during the reign of Gordian III,<sup>18</sup> have common iconographic features and types with certain of the precious medallions. This view is further strengthened by the observation that the Alexandrian medallions of the third century AD served to a certain extent as the iconographic prototypes for the Contorniate approximately one century later.<sup>19</sup>

For those who maintain the authenticity of the so-called *niketeria* one might also add the case of the mostly gold, sheet-like *danakes* from third century AD graves, both uniface and biface, which reproduce sometimes more or sometimes less the exact renderings of their prototypes. We should note also the use of other iconographic subjects on the *danakes* similar to the more expansive representations on the sides of the larger *niketeria*.

\*\*\*\*

The discovery of the main group of *niketeria* in two quite distinct hoards, at Tarsos in Cilicia and at Aboukir in Egypt,<sup>20</sup> justifiably raises the question of just how such a mix of coins, ingots, and coin-like medallions came to rest together, especially since, according to the prevailing view, the medallions were awarded as prizes to victors in the ecumenical games of the *koinon* of the Macedonians in Beroia, Macedonia.<sup>21</sup> Such medallions were not produced as a circulating medium and were not used in commerce, but rather were collector's items, which clearly bestowed honor on the private athletes who owned them. The existence, nevertheless, of common dies for the obverse and reverse sides of some of the medallions within each separate group, suggests that the coin-like objects, before they were sent or spirited away to the places in which they were found, had constituted a homogeneous part of a serial production, and had been placed in safekeeping at some official, controlled facility. The Tarsos-Aboukir medallions form a homogeneous group with intrinsic association, irrespective of how in reality it came to be split into two groups, having its origin in a common source.

17. I. Touratsoglou, "La métropole de Béroia. Siècle du *Koinon* des Macédoniens. Production monétaire-iconographie monétaire," in *Folia Archaeologica Balkanica in honorem Verae Bitrakova Grozdanova* (Skopje, 2006), 293–305.

18. Touratsoglou (1988), 70, n. 147.

19. See Alföldi and Alföldi (1990).

20. See Dressel (1906); Vermeule (1982); Savio (1994/1995); and R. Hobbs, *Late Roman Precious Metal Deposits c. 200–700. Changes over Time and Space*, BAR 1504 (Oxford, 2006), 1245.

21. W. Leschhorn, "Griechische Agone in Makedonien und Thrakien. Ihre Verbreitung und politisch-religiöse Bedeutung in der römischen Kaiserzeit," in *Stephanos nomismatikos Edith Schöner-Gesius zum 65. Geburtstag*, ed. U. Peter, (Berlin, 1998), 400ff.

It is certainly worth noting that in the two groups as a whole, no *niketeria* have been identified of smaller diameter and weight, that is, medallions which might have been destined, according to research to date, either for the victors of events of secondary importance, or runners-up, though such have emerged as isolated finds.

The presence of medallions—the weighty examples in particular—in hoards of valuable objects (coins and ingots, dating to the same period as the *niketeria* but also to later times) could be explained as the result either of the dispatch of quantities of gold from the reserves of the central authority, or the looting of the place where they had been in safekeeping prior to distribution. Nevertheless, it is necessary to resolve the problem of why medallions with differing dates from the coins were found in the same hoard. To the extent that the *niketeria* were prizes for games, their issue must have been predetermined and recognizable, as is precisely the case—in a highly indicative way—with those medallions on which the date is inscribed along with the reason for the issue (e.g., ΟΛΥΜΠΙΑ ΔΟC) or the name of the ruling emperors at the time of the issue (ΒΑΣΙΛΕΩΝ ΦΙΛΙΠΠΩΝ) or lastly, which bear a depiction one of the initiators of the series (e.g., Caracalla). Unless of course they were archive ‘specimens’ or unused pieces.

It appears more likely, as in the case of the third-century Contorniates, which were issued by a closed society with idolatrous ideals that was on the defensive, that for a number of emperors, the gold medallions of the Tarsos/Aboukir type were the principal means for personal promotion and identification, even incarnation. They attempted this by associating themselves with the legendary Alexander, role model and fellow athlete of the new lords of the earth, in their march against the New Persians and the actual or hoped for victory over the enemy. As latter-day Alexanders, Caracalla, Severus Alexander, Gordian III, and Philip the Arab in their Eastern campaigns, some just coming and going and others setting up camp for longer time in the birthplace of the Macedonian, were associating themselves with the glory of their idol; they organized, contributed to and strengthened, perhaps even by their presence, ecumenical games in honor of the all-conquering general (*Alexandrian Olympics*), and most certainly endowed the province of Macedonia with infrastructure.

To a similar framework of ideological propaganda and efforts to boost the morale of the armies with ideals from other eras, but also in a climate of advertising Macedonian glory by celebrating even relevant anniversary dates,<sup>22</sup> belongs the carefully planned production of the so-called *niketeria* most probably as *dona-*

22. For example AD 243/4 coincides with celebrations for the 600th anniversary of the birth, in 357/356 BC, of Alexander the Great, the year AD 248 with the millennium of the founding of Rome (ab urbe condita: 752 BC).



*tiva* to high-ranking officials (the heavier ones) and those in lesser positions (the lighter ones)—military commanders and/or civic leaders—rather than as ‘prizes’ to the victors of games.<sup>23</sup> They were distributed, no doubt, during the ecumenical games in honor of Alexander in the capital of the *koinon* of the Macedonians.

This is also the reason why the various imitations or free rendering of the medallion representations on coin-like creations on sheets of gold originate mainly from the region of ancient Macedonia (Thessaloniki, Beroia), as grave offerings (*danakai*) substituted for real coins. They are not known from the wider geographical area from which the victors of the ecumenical games of Beroia came, but from the narrower Roman province and seat of the delegates to the *koinon* of the Macedonians and local officials, where the original *niketeria* were known, accessible and could be copied. The medallion owned by a resident of Setta in Euboea, an area within the Greek heartland, may also be connected with a Macedonian origin.<sup>24</sup>

As has been observed in the past, the medallions of the Tarsos-Aboukir category were the products of different periods, within an era extending from the reign of Caracalla to that of Philip the Arab and his son. Proponents of a specific ideology and servants of a specific cause, the medallions depict iconographical types and representations which primarily relate to the personality and achievements of Alexander the Great and to a lesser extent the last members of the Argead dynasty (Philip II and Olympias). The busts or heads of the great general, bare, diademed or helmeted and the presence of members of his family, the scenes of the royal hunt in the mythical ‘paradises’ of the East, the representations of military triumph or apotheosis, etc. of the Macedonian—and by extension of the Roman emperors themselves—make up the vast majority of the iconographical subjects.

To these are added, in significant proportion, scenes of marine groups with Nereids and sea creatures—a reference to Thetis and her retinue and by extension

23. Cf. lately also the views of C. Arnold-Biucchi, *Alexander's Coins and Image*, Harvard University Art Museums (Cambridge, 2006), 78–79. At this point it should be noted that the victors of games, and not only of the Alexandrian Olympics at Beroia, were awarded special basket-shaped crowns (*βραβεῖα*)—perhaps of precious metal—the shape and form of which are depicted on bronze coins of the cities and of the *koina*, on stone reliefs and in mosaic compositions of the period. On the numismatic examples, see I. Touratsoglou, “The Koufalia/1966 hoard of third c. Greek Imperials in the Numismatic Collection of the Thessaloniki Museum,” *Ancient Macedonian Studies in honor of Ch. F. Edson* (Thessaloniki, 1981) 315–325. On the representations on mosaic floors, see N. Duval, *BAParis* 12–14 (1976–78), 211ff.

24. See Bernardi (1970), 89–90; cf. Savio (1994/1995), 96. The ‘Asia Minor’ provenance not only of the Vermeule roll (1982, 1986) but also of the Setta medallion cannot be ruled out, if the two objects are connected in a sense with the treasure hoard of Tarsos and/or similar ones. This is irrespective, of course, of the value of the novel-like account presented by Bernardi, without identifying her sources, of the Asia Minor provenance of the medallion, which had been given as a gift to “una greca ex-favorita” by some “funzionario turco.”

to the Homeric Achilles, beloved hero of Alexander<sup>25</sup> and the representation of the rescue of Andromeda by Perseus, associated with, at the time, the beloved myth of Cassiope,<sup>26</sup> or most probably an allusion to Alexander's genealogical relationship with Perseus.<sup>27</sup> In addition, albeit limited in number, there are depictions of Athena, chief patron goddess of the philhellene Gordian III,<sup>28</sup> and of Apollo. The latter most likely constitutes a reminder that the ecumenical games at Beroia were equal to the Actium Games (ἰσάκτιοι).<sup>29</sup>

The sole exception in the general iconography is the appearance on certain issues of the figure of Caracalla, the Roman emperor who was totally obsessed with Alexander,<sup>30</sup> not only identifying with the Macedonian, but imitating him to a ludicrous degree.<sup>31</sup> Moreover, any general examination of the iconographic repertory should not overlook the probability that the extant *niketeria* constitute only part of the original sample.<sup>32</sup>

25. W. Ameling, "Alexander und Achilleus: eine Bestandaufnahme," in *Zu Alexander d. g. Festschrift G. Wirth zum 60. Geburtstag am 9.12.86* (Amsterdam, 1988), 657–692; Stewart, *op. cit.* (1993), 78–86; A. Cohen, "Alexander and Achilles: Macedonians and Mycenaeans," in *The Ages of Homer: A Tribute to E. T. Vermeule*, eds. J. B. Carter, S. P. Morris (Austin, 1995), 483–505; and Stewart, *op. cit.* (2003), 32–33. Achilles, moreover, is also depicted in the representation of the device of the shield of the Dressel medallions 1906 E and U and Alföldi, *op. cit.*, (1990) Contorniate, pl. 22, 7–12.

26. G. W. Bowersock, *Hellenism in Late Antiquity* (Ann Arbor, 1990), 50ff.

27. J. Roisman, "Honor in Alexander's Campaign," in J. Roisman, *A Companion to Alexander*, (Leiden, 2003), 285.

28. L. Robert, *CRAI* (1970), 27; cf. *Chron. Min.* I 147: Agon Minervae. On the philhellenic policy of Gordian III, see L. Robert, *Revue Numismatique* 19 (1977), 11ff. Attempts to interpret the iconography of the reverse sides of the *niketeria* were made by Bernardi (1970), 87.

29. I. Touratsoglou, "Δύο νέαι επιγραφικά μαρτυρία περί του Κοινού των Μακεδόνων," *Ancient Macedonia* I (1968), 285–286. It should be noted that AD 213/214, when the Dressel E and U medallions were most probably struck, marked the completion of 245 years since the naval battle of Actium. In Thessaloniki the local games were equal to the Pythian Games (ἰσωνύθιοι). See Touratsoglou (1988), 17, n. 82 and p. 67ff.

30. Cf. A. Heuss, "Alexander der Grosse und die politische Ideologie des Altertums," *Antike und Abendland* 4 (1954), 99 ff; J. Gagé, "Alexandre le Grand en Macédoine dans la Ière moitié du III<sup>e</sup> siècle ap. J.-C.," *Historia* 24/1 (1975), 13ff.

31. D. Baharal, "Caracalla and Alexander. A Reappraisal," *Studies in Latin Literature and Roman History (Collection Latomus 227)* 7 (1994), 524–567; and D. Boteva, "Following in Alexander's footsteps: the case of Caracalla," *Ancient Macedonia* VI/1 (1999), 181–188.

32. The case of the rolled fragment from Asia Minor (Vermeule 1982, 1986) points precisely to the fate of what was most probably a significant number of *niketeria*, which either ended up in the furnace, or were cut into pieces for use as bullion, not only by their owner in difficult times, but also by hostile criminal elements interested solely in the value of the metal.

As for their place of production—apart from Macedonia (Beroia), for obvious reasons—Rome, Pergamon, Ephesus and even Perinthos<sup>33</sup> have been suggested, based on the assumption that miniature sculpture of such quality could have been produced in large centers with correspondingly advanced know-how. However, the origin of the bronze Contorniate at Rome,<sup>34</sup> issues which used the gold *niketeria* as iconographic prototypes, leads to the assumption that the medallions of the Tarsos/Aboukir type were probably designed and produced in the heart of the empire, where highly skilled artists were available and from where the royal desire emanated for various kinds of propaganda, which in this case took the form of worship of and even obsession with Alexander.

It is in Rome, moreover, and obviously in the mint archive that the makers of the Contorniate would have sought their valuable prototypes rather than in some provincial town or city of the empire. Nor, of course, is it likely that they organized a campaign to locate the gold *niketeria* in the hands of the heirs of the victorious athletes.

An attempt to categorise the known medallions (Tarsos, Aboukir, etc.) chronologically on the basis of the die links,<sup>35</sup> iconography and legends on the reverse types, results in the following next page.

Lastly, in order to understand the entire matter of the *niketeria*, one must examine the reason and the circumstances under which a number of them ended up, separately, at Tarsos in Cilicia and at Aboukir in Egypt, respectively.

The fact that the latest issued coins of the Aboukir treasure were struck during the reign of Constantius I Chlorus, leads to the view that the concealment of this particular hoard took place in the period after AD 293, when he was made Caesar under Maximian, who shared imperial rule with Diocletian.

In the case of Tarsos, although it appears at first glance that the hoard was buried no later than the reign of Gordian III,<sup>36</sup> the close similarity of the subject-matter on one of the three *niketeria* therein with the obverse of a medallion from the Aboukir treasure, struck in the reign of Philip the Arab (244–249), clearly supports the view that the hoard in Cilicia was buried during or immediately after the reign of that emperor and his co-ruler son.

33. See Vermeule (1982 and 1986). See also D. Salzmann, "Alexanderschilde—Numismatische Zeugnisse für die Alexanderverehrung Caracallas," in *Wissenschaft mit Enthusiasmus. Beiträge antiken Bildnissen und zur historischen Landeskunde, Klaus Fitschen gewidmet*, ed. J. Bergemann (Rahden/Westf, 2001), 182, n. 62.

34. Alföldi and Alföldi (1990).

35. Cf. also R. Göbl, *Antike Numismatik* (München, 1978), nos. 1–18, pl. 1–2.

36. See M. Papisca, "Immagini della imitatio Alexandri in età severiana. I medaglioni di Tarso," *Ancient Macedonia VI/2* (1999), 859–871.

<b>Time of Caracalla</b>	<b>Time of Gordian III</b>
E a [Bust of Caracalla] + E b	D a [Olympias] + D b [Nereid]
K a (=C a + L a) + K b [Nereid]	M a + M b [Athena] ΟΛΥΜΠΙΑ ΔΟC
L a (=K a) + L b	N a + N b
Sa (=E a) + S b (=K b) [Nereid]	O a [Olympias?] + O b [Athena]
T a [Bust of Caracalla] + T b	P a (=O a) + P b [Perseus+Andromeda]
U a + U b (=E b)	Q a [Olympias?] + Q b (=D b) [Nereid]
	R a (=Q a) + R b (=K b) [Nereid]
	W a [Athena] + W b [Lion]
<b>Time of Severus Alexander?</b>	<b>Time of Philip the Arab</b>
B a + B b	A a + A b
C a (=K a + L a) + C b (=B b)	F a (=A a) + F b
H a (=B a) + H b	G a (=A a) + G b ΦΙΛΙΠΠΩΝ
I a (=B a) + I b (=B b)	V a + V b (ca. A b)
X a + X b	1 a + 1 b (ca. A b)
	2 a + 2 b
	3 a + 3 b (=2 b)

Note: The capital letters (A-U) correspond to the classification of the medallions by Dressel (1906). For those medallions which appeared after the discovery of the Aboukir find or, as earlier museum acquisitions, had not been linked thereto, the remaining letters of the Latin alphabet have been used: V = N<sub>3</sub> (Asia Minor), W = N<sub>2</sub> (Serres), X = N<sub>1</sub> (Setta). The numbers (1-3) refer to the medallions from Tarsos (Mowat 1903). The lowercase letters correspond to the obverses (a) and reverses (b).

The historical background in which a hasty burial of a considerable amount of gold at Aboukir—possibly a cash shipment, directly from Rome, or even the treasury (*thesaurus*) of the local mint at Alexandria with a number of stamped gold ingots (*massa*)<sup>37</sup>—could be none other than that of AD 296-297 when Egypt and Armenia were torn by armed conflict. That is, when Galerius, having successfully put down a local rebellion in Egypt, hastened through Syria, which was in turmoil, to Armenia in order to repel the invasion of the Sassanian king Narseh. The first phase of the conflict did not favor the Roman army, and Diocletian, marching quickly from the Balkans, quelled the rebellion of the usurper Domitius Domitianus, and after a months-long siege took Alexandria.<sup>38</sup>

37. See M. Hendy, *Studies in the Byzantine Monetary Economy, c. 300-1450* (London, 1985), 383ff.

38. W. Treadgold, *A History of the Byzantine State and Society* (Stanford, 1997), 22ff.

By contrast, the concealment of the Tarsos treasure during the reign of Philip the Arab (AD 244–249) is obviously connected with the events of the last years of Gordian III in Mesopotamia (AD 244) and Rome's efforts to agree terms with the Sasanians, resulting in the payment by the former to the latter of 50,000 gold *aurei* as war reparations.<sup>39</sup> This sum clearly would have burdened not only the imperial treasury (*fiscus*), since it is likely that a portion of this precious metal, in the form of money or valuables, belonged to high-ranking officers of the Roman army stationed in the provinces along the Danube (as well as to their families), which supported the *exercitus orientis* on the battlefields of the East.<sup>40</sup> Mixed hoards comprising both money and precious objects and jewellery, constitute an eminently characteristic example of concealment of valuables and/or hasty burial of booty throughout the empire during the difficult period of the barbarian invasions in the second half of the third century AD.

A second, alternative explanation for the burial of Roman gold in the Near East is provided by the dramatic events in the reign of Valerian I that resulted in the capture of the emperor (AD 260) and a large number of his officers, the seizure of the imperial baggage train and Shapur's subsequent invasion of Armenia and the eastern part of Asia Minor (Cappadocia, Cilicia) including Syria.<sup>41</sup>

Inevitably, the lack of additional information takes any further investigation into the realm of speculation. We must therefore await new evidence: new surprises from the goddess Tyche.<sup>42</sup>

39. On this regard, see M. Back, *Die sassanidischen Staatsinschriften* (Leiden, 1978), 290ff. Cf. M. Sommer, *Die Soldatenkaiser* (Darmstadt, 2004), 39.

40. I. Touratsoglou, *Greece and the Balkans before the End of Antiquity* (Athens, 2006), 166, n. 153.

41. See in this regard Back (1978), 306–314; cf. Sommer (2004), 49.

42. This paper should be considered a tribute not only to the extremely important scientific work of the only numismatic institute in the New World with international reach—the American Numismatic Society, headquartered in the dynamic cosmopolis of New York—but also in general to that large number of American numismatists who have contributed the utmost to the Old World of coins of Greek and Roman antiquity.

Warm thanks for their assistance are due to D. Ignatiadou (Archaeological Museum of Thessaloniki), T. Stefanidou-Tiveriou (University of Thessaloniki), D. Evgenidou (Numismatic Museum, Athens), I. Graikos (Archaeological Museum of Beroia), K. Dahmen (Münzkabinett, Berlin), A. Dowler (Department of Coins and Medals, British Museum), S. Hurter (Leu Bank), D. Gerin (Bibliothèque nationale de France, Cabinet des médailles, Paris) and V. Heuchert (Heberden Coin Room, Ashmolean Museum, Oxford).

## Alexander in Gold and Silver: Reassessing Third century AD Medallions from Aboukir and Tarsos

PLATES 100–110

KARSTEN DAHMEN\*

This article provides an overview and catalogue of third century AD gold medallions with representations of Alexander the Great from the hoards of Tarsos in Cilicia and Aboukir in Egypt together with related smaller medals in gold and silver. Various questions on iconography, production, and use of these medallions from Aboukir and Tarsos are discussed. In addition a PIXE analysis of the five specimens, now in Berlin, is provided. Finally, these medallions are understood not as prizes awarded to victors of athletic and other competitions at Beroia (so-called *niketeria*), but as gifts presented by the Agonothetes and Makedoniarchos to high ranking visitors on the occasions of these games in honor of the emperor and Alexander.

From the moment of their discovery more than one hundred years ago, a hoard of twenty Roman medallions from Aboukir in Egypt has puzzled numismatists, archaeologists, and historians.<sup>1</sup> First suspected as modern forgeries, the medal-

1. I am grateful to the curators of the various museums consulted for allowing full access to their collections (see catalogue) or provision of photographs respectively, which made autopsy of the medallions from Tarsos and Aboukir except those in the museums of Baltimore and Thessalonika possible (which I did not visit). The latter institutions liberally provided information and photographs. Andrea Denker of the Hahn-Meithner Institute in Berlin and her colleagues Zsófia Kertész and Inés Ortega-Feliu provided the PIXE analysis of the Berlin specimens; J. Giaccari and C. Snyder produced fresh measurements of weights by Sartorius analytical balance (model CP324 S) of the Baltimore medallions. In Berlin, Bernhard Weisser shared many of the discussions on the subject, as did Yannis Touratso-

\* k.dahmen@smb.spk-berlin.de

lions led to a controversy about their authenticity that shaped the early discussion of those remarkable gold representations of Alexander the Great in legend.<sup>2</sup> Quite soon, questions as to their function (whether as prize money, amulets, or collectables), origin, and places of production became the focus of a surprisingly much scarcer scholarly discussion—one very much in contrast to their extraordinary material value and fascinating wealth of images. After a century of research, one must acknowledge that although appealing interpretations and exciting ideas have been brought forward, much of the commonly accepted understanding originates in the first five and most intensive years of research from 1902 onward.

In the following pages, I will reexamine these medallions and related numismatic objects. In reassessing the evidence from the medallions and combining archaeological and historical testimony from different perspectives, this paper intends to examine their iconography, technique, and function. To this end, a detailed catalogue of the material in question—the Tarsos hoard with three medallions, the spectacular find of twenty specimens from Aboukir, and three dozen smaller silver and gold pieces—is provided.

I shall first look at the hoard evidence, then at the chronological information offered by the medallions themselves. Third, the images, motives, and striking technique will be examined from different perspectives and compared to Hellenistic and Roman prototypes. The question of use, function, and geographical setting forms the last part. The results will be presented in a conclusion.

### 1. The Archaeological Evidence: Stories of Lost Opportunities

In 1863,<sup>3</sup> a hoard surfaced near Tarsos in ancient Kilikia, now modern Turkey. It included three huge gold medallions (henceforth Tarsos I–III), twenty-three Roman *aurei* minted between AD 72 and 243, one medallion<sup>4</sup> of Severus Alexander from AD 230, four bars of gold, two gold *tintinnabula* (bells),<sup>5</sup> and several amulets of gold and lapis lazuli. Of these twenty-three gold coins, the majority, sixteen

glou, in preparation of his article in this volume, the manuscript of which he kindly allowed me to read in advance. I am grateful to Carmen Arnold-Biucchi for reading a first draft of the manuscript, and to Oliver Hoover and the anonymous readers for their much valued suggestions. Any errors remain the author's responsibility. It is not the objective of this paper to offer a final solution to the many problems involved with the medallions in question; rather, I hope to create new interest and discussion of this fascinating group of objects and provide a basis and instrument for further research of this group as a whole.

2. See Toynbee (1944, 69, n. 43) for the ongoing uncertainties during the 1940s despite Dressel's (1906, 72–85) convincing arguments in favor of their authenticity. Compare also Dressel (1909, 137–157) and Weiß (2007, 45) on Dressel's personal crisis during this debate.

3. Vermeule (1982), 62: "1863 (some say 1867)," obviously referring to Toynbee (1944), 69.

4. Gnechi (1912), 1: 5, no. 2, pl. 1.9.

5. Neuer Pauly 12.1 (2002), 609, s. v. *Tintinnabulum* (A. Dierichs).

pieces, date from the period of AD 198–217.<sup>6</sup> Thus it is likely that this hoard was assembled during the third century AD and buried late in the reign of the emperor Gordian III or in that of his successor, Philip the Arab, around AD 244.

Because the hoard passed through many hands on its way to the art market in Paris, we know very little about the findspot or the archaeological context. It was claimed that the medallions came from superstructures of an ancient building<sup>7</sup> in the plains around Tarsos. The coins first passed into the hands of an Armenian. Then the most precious parts of the find came into the hands of a Mess. Rollin and Feuadent of Paris, who sold the three Alexander medallions and the other of the Emperor Severus Alexander to the distinguished collector Count Tyskiewicz. He gave them—at the kind invitation of the French Emperor Napoleon III—to their present keeper, the Cabinet des Médailles in Paris in 1868.<sup>8</sup> The bars and other gold objects had already passed into the collection of the Alexandrian collector Giovanni de Demetrio.

The hoard of Aboukir (Abu Qir) was discovered in February or March 1902 near that town in the Delta of Egypt and was quickly dispersed in trade.<sup>9</sup> This remarkable assemblage of ancient gold is believed to have included six hundred or more Roman *aurei*<sup>10</sup> dating between the reigns of Severus Alexander and Constantius I, eighteen to twenty bars, and twenty Alexander medallions.<sup>11</sup> The chronological distribution of the *aurei* makes us expect a hoard closure date at

6. Longpériér (1868), 326–330; Noe (1937), 279, no. 1064 (the hoard's burial wrongly dated to AD 227).

7. Longpériér (1868, 309) quotes the workmen's statement, the treasure having allegedly been found within an old church, but quite rightly keeps his doubts about this architectural structure's identification.

8. Mowat (1903, 1) reports the sum of fifty thousand francs paid by Napoleon for three medallions, twenty-three *aurei*, and the Severus Alexander medallion. Compare *Revue Numismatique* (1869–1870), 133 (acquisition notice for the medallions but not the *aurei*).

9. Dressel (1906), 3–4, n. 1; Eddé (1905), 140: “trouvé dans une vieille ruine appelée khar-aba en arabe—ce qui veut dire ruiner;” Rubensohn (1902), 46–49: “bei Alexandrien, wie es heißt, in Abukir” [*Archäologischer Anzeiger*].

10. The majority are of Diocletian and Maximianus Herculus, but also included are an aureus of Balbinus (former Evans Coll., *RIC* IV 2, p. 170, no. 8), a *quinarius* of Carinus (Berlin, Münzkabinett Acc. 1903/648 together with eight more coins from Gordian III to Constantius I; bought from Kyticas in Cairo, “Aus dem Funde von Abukir”), and a five-*aurei* piece of the same emperor (Voetter 1903), 130, no. 2290, pl. 43. Cf. Dressel (1906), 4, n. 2.

11. Two of the bars found their way into the British Museum (and are currently on display in the HSBC Money Gallery), a third was reported in trade by Dressel in 1906 (presumably later purchased by J. P. Morgan), and a fourth was cut into four pieces with the intention of melting it down, which actually did happen to the remaining bullion. The composition of the hoard is described by Dressel (1906), 1–2, n. 2; cf. Noe (1937), 14–15, no. 6; and also Arvanitakis (1903), 247–268.



the beginning of the fourth century AD at the latest.<sup>12</sup> Unfortunately, there still remains some doubt about whether the Roman *aurei*, gold bars, and the Alexander medallions were really part of the same single hoard.<sup>13</sup>

The first date proposed for these two hoards was somewhat broad: from the beginning of the third century AD to the 310s. Stylistic and historical grounds exclude a date earlier than the accession of Septimius Severus.

In addition, a number of related medallions and smaller coin-like pieces have been considered in tandem with the medallions in question. In contrast to their more spectacular siblings, these pieces of gold and silver in some cases provide information on their archaeological context or origin. One medallion was acquired by W. M. Leake at Serres in western Greece during the Napoleonic wars and is now kept in the Fitzwilliam Museum in Cambridge.<sup>14</sup> The fragment of another,<sup>15</sup> now in the collection of Jeffrey Spier, is said to have come from Asia Minor, while a third piece of very doubtful authenticity from Setta on Euboea was given to the National Numismatic Museum in Athens in 1964.<sup>16</sup>

Of the smaller coinlike objects, a gold specimen (cat. 2),<sup>17</sup> now in the British Museum, is said to have once formed a part of the Tarsos hoard, while a second<sup>18</sup> in Oxford (cat. 4) is claimed to have come from the Aboukir hoard (both somewhat doubtful references from auction catalogues). Another gold piece with a portrait of Olympias in Berlin (cat. 13) allegedly originates from Macedon.<sup>19</sup> Two stylistically inferior pieces are the only examples with a detailed archaeological record:<sup>20</sup> the first (cat. 12) was found in a grave of the Roman cemetery of ancient Beroia in Macedonia. Other burials at this spot contained Roman imperial coins from Probus to Constantine I and also earlier bronze coins of the Macedonian

12. Constantius I died July 25, AD 305, and we should expect coins of later emperors had the burial date been substantially later. Maximianus ruled as Caesar from AD 285 and as Augustus from AD 286 onward. He resigned together with Diocletian in AD 305; coins in his name were produced until his death in AD 310.

13. Dressel (1906, 3–4) mentions these doubts and gives references for his sources. The homogeneity of all these objects is generally accepted.

14. SNG IV Fitzwilliam Museum Cambridge, no. 2351, pl. 43.

15. Vermeule (1982), 71: It is even possible that the reverse of this piece and Dressel A (the use of Alphabet letters to identify single medallions from Aboukir introduced by Dressel [1906] is followed here) might have been struck with the same die.

16. The condition of the flan strongly suggests that this piece is a cast and hence a modern (presumably early twentieth century) forgery.

17. Wroth (1898), 99–100, pl. 10.6. From the Montague Sale catalogue (March 1897), lot 118.

18. Hess-Leu Auction 16 April 1957, in Luzern, lot 163, pl. 6; *Ars Classica* 17, Auction 3, Oct. 1934, in Luzern, lot 413, pl. 13.

19. *AMNG* III 1 no. 880.

20. Touratsoglou, *ADelt* 24 (1969), 313, pl. 328 b.

*koinon*, whose production ceased in AD 246. Therefore, these finds date to the last half of the third century AD or the first decade of the fourth century AD. The second piece (cat. 14)<sup>21</sup> of the same distinct group comes from a grave of the second to third century at Athens. A final small gold piece (cat. 10) was acquired by the British Museum in 1880 from a collection of coins originating from the Troad.<sup>22</sup>

## 2. Chronology

The medallions themselves offer considerably better information on their date of production than the archaeological evidence:

1. The portrait of Caracalla on the obverse of three of the medallions (Dressel E, S, and T) is a type common during his sole reign from December AD 211 to April 217, though a posthumous resurrection is possible as well.<sup>23</sup>

21. A sheet of gold with similar representations was excavated at the Academy of Plato in Athens, again in a grave, which has been vaguely described as "Byzantine" by its excavators. See Christodouloupoulou, *ADelt* 19 (1964), 15, pl. 4.66.

22. *BMC Troad*, p. 12, no. 37. Its reverse shows a grazing horse well known as the city badge of Alexandria in the Troad. It may represent a local transformation rather than being a regular part of this group of small medallions. See here cat. 10 and 38.

23. According to Fittschen and Zanker (1994, 106, no. 91), it was created in AD 212 after Geta's murder. In use mainly from 212 to 215, according to coins (Fittschen and Zanker 1994, 106, n. 3) and replaced by a tranquilized version ("2. Alleinherrschartypus" or Tivoli type; see Fittschen and Zanker 1994, 111, no. 94, n. 5: e.g., *BMCRE V* pl. 70.12, 16, 18, 20; 71.19 in AD 215, *BMCRE V* pl. 71.12, 13, 15, 17–20; 72.1, 3–8; 77.8 in AD 216, *BMCRE V* pl. 72.9, 11–18, 20; 73.1–6; 77.10, 11, 13 in AD 217). Salzmann (1983, 370–371) stresses the different hairstyles (voluminous locks as opposed to flatter "a penna" ones) as the distinctive pattern between these two types. The so-called 1. Alleinherrschartypus may on the other hand have been used after AD 215 (Fittschen and Zanker 1994, 106, no. 91). Dressel T in Baltimore clearly shows Caracalla wearing a beard (as he did on contemporary coins from c. AD 209 on), while Dressel E and S (the latter two very similar to each other but not from the same die) at least feature a moustache. Posthumous coin portraits of the divine emperor feature a much more simplified bearded head (following Fittschen and Zanker 1994, 111, n. 8, related to Tivoli type) and without a laurel wreath as was customary for these kinds of posthumous portraits at this time: *BMCRE V* p. 531, nos. 7–8, pl. 85.4; *RIC IV* 2, p. 128, nos. 717, 719, 720. Compare Schulten (1979), 115–116, nos. 300–303, pl. 6. We know of a series of portrait sculptures of Divus Antoninus commissioned by Macrinus and Diadumenianus, but there is no report on their design: Pekáry (1985, 37); Macrinus *Historia Augusta* 6.8; Diadumenianus 3.1. When Elagabalus was hailed emperor there were still portrait heads of the young Caracalla at hand: Cass. Dio 78.33.2. Late Roman contorniates also show Caracalla, but his portrait there relates only in two cases to a proper type of his (dies II–III); here it is now partly deriving from Antoninus Pius (die I) or a rather fictitious type (die IV) respectively. See Mittag (1999, Vorderseitenstempel Caracalla I–IV, pl. 10).



Figure 1. Medallion of Philip I. British Museum.

2. The reverse design of Dressel L is closely modeled after a Roman medallion of the emperor Philip the Arab of AD 247 (Fig. 1).<sup>24</sup>

3. The type of the reverse of Dressel O, an enthroned Athena feeding a serpent in an olive tree, is only known from bronzes of the Macedonian *koinon* under Gordian III.<sup>25</sup>

4. The standing Athena with column and olive tree of Dressel M has no known parallels in ancient iconography. The closest comparison may be made with the types on Athenian civic coins of c. AD 264–267.<sup>26</sup>

5. The legend “Olympiados” on the column of the same medallion Dressel M has been interpreted by some authors as indicating the 274th year of the Actian Era: ΔOC = AD 242/243. This view is not shared by the author of this paper (see section 7, below).

6. The peculiar shape of the spearhead on all the Aboukir pieces<sup>27</sup> has its nearest parallel in a bronze coin of the city of Anchialos in Thrace minted under Gordian III and another bronze coin of the Macedonian *koinon* of the same period.<sup>28</sup>

24. For details and full arguments for this and the following pieces see below.

25. *AMNG* III 1, nos. 546 and 719 (no. 546 = pl. 4.21). See also section 3.3, below.

26. Kroll (1993): 149, no. 302a, pl. 19 = Svoronos (1923–1926), pl. 84.9–14 (lacking the olive tree, Athena holds owl in hand, another on column left). Dressel (1906, 74) assumes this bronze coin takes its design either from this medallion from Aboukir or that they both would derive from the same lost original.

27. Of the Tarsos medallions, only one scene on two die-identical pieces I and II shows Alexander on his mount with a smaller spear fighting a lion. In this case, the spearhead is hardly visible against the body of the king and—as in all other such cases—not specifically shaped.

28. Münzer and Strack (1912), 272, no. 618; Lanz Auction 117 of 24 Nov. 2003, lot 1061, pl. 57. *Koinon*: *AMNG* III 1, p. 141, no. 581, pl. 5.7 = *AMNG* III 2, p. 16, no. 52, pl. 5.11, and Lanz Auction 120 of 18 May 2004, lot 146, pl. 8. Dressel (1906, 2, n. 2) also draws at-

7. The alleged portrait of Olympias on Dressel D, Q, R<sup>29</sup> is said to be very similar to one struck from a single reverse die used for civic bronzes of Thessalonica under Gordian III.<sup>30</sup>

8. The characteristic shape of the letters  $\Xi$  and  $\Sigma$  are consistent with letterforms in inscriptions from the first half of the third century AD.<sup>31</sup>

In sum, the evidence suggests the medallions were struck, at different times, between AD 211 and 244. The similarities to a dated Roman medallion prototype in one case may point to a slightly later date (AD 247). These dates do not contradict the hoard evidence, which gives a closing date for the medallions from Tarsos shortly after AD 243 and those from Aboukir around AD 305. The smaller related pieces (at least those made of sheet metal) seem to have been commonly used as funeral gifts during the second half of the third century AD.<sup>32</sup>

### 3. Varying Perspectives: Hellenistic and Roman Traditions

#### 3.1. *Hellenistic Features*

##### *Techniques*

One of the most significant characteristics of both the medallions from Tarsos and Aboukir is the prestriking preparation of flans.<sup>33</sup> The same is true for the Cambridge specimen and even some (cat. 2, 4, 5)<sup>34</sup> of the smaller coinlike objects. Both obverse and reverse or one side only show traces of intensive hammering,

tention to one tetradrachm of Philetairos of Pergamon (Westermarck 1961, 58, group IVa, die V.XXIX-R. 3 pl. 3 [Berlin, Münzkabinett Acc. 1873 Fox, minted under Attalos I, who reigned 241–197 BC]) and a *sestertius* of Hadrian (Cohen II<sup>3</sup>, 220, no. 1380 = *RIC* II, p. 440, no. 782a), both obviously much too early for our medallions.

29. The smaller medallion, AMNG no. 880, is said to be of doubtful authenticity, although Dressel (1906, 32, n. 2) and others calls it genuine.

30. Touratsoglou (1988), 70, 286, pl. 41 (die R 142).

31. Papisca (1999), 859–860, 866.

32. On the term “Danake,” see Babelon (1901, 514–518, esp. 515–517) and the contribution of Touratsoglou (2008).

33. There is no information available to me regarding this subject on the medallion now in the possession of J. Spier. Dressel (1906, 66–72, esp. 71) and Eddé independently proved the sequence of flan preparation, hammering, poststriking, circle engraving, and edge filing. Dressel C shows the engraved circle going over the spearhead on the obverse. Hammering in case of the Tarsos medallions took place before striking, as the obverse of no. III indicates. These three medallions show no traces of any circular lines: Dressel (1906, 72, n. 1) and the author’s autopsy.

34. AMNG nos. 877 and 882 (the latter only on parts of the obverse); SNG Ashmolean III no. 3111, pl. 68; but none of the examples in silver. The doubtful Euboia medallion in Athens lacks this characteristic.

which leaves only the center of the flan untouched and plain.<sup>35</sup> This procedure was adopted to force some metal back toward the center after the unusually large flans had been produced by casting. The hammered zone was not intended to come into contact with the dies, and in cases where smaller parts of an image overlap, the different surface levels caused a loss in quality of the image impressed at the time of striking. A similar technique (also prestriking and mostly attested for obverses)<sup>36</sup> was used in the second century BC for the wreathed tetradrachms of Kyme, Myrina, Magnesia-on-the-Maiandros, Herakleia, Lebedos, Smyrna, Bithynian royal coinage, some posthumous Alexanders from Temnos (Aeolis), and Alabanda (Karia)—coins struck on broad flans of similar thickness as the Aboukir medallions.<sup>37</sup> Some Pamphylian Alexanders may now also be included in this group and, if so, the procedure itself dates to at least the late third century BC.<sup>38</sup> Apparently, this procedure was employed to reuse older Attic weight coins as ready-made flans. The purpose of the hammering was to obliterate the original design of the host coins. Nevertheless, in the case of our medallions, Dressel's presumption that the huge flans were hammered in order to permit a more sophisticated design may still stand. The weights of the medallions clearly show a lack of standardization, making it unlikely that old coins were reused as flans.<sup>39</sup> Three of the smaller gold medallions (but not the silver ones) also underwent this same hammering procedure and lack a weight standard. They too were produced from new flans. Presumably, the hammering was an additional decorative feature, not a technical necessity; this deliberate archaizing technique may have been employed to make the medallions appear "ancient" for a third century onlooker.

35. See Dressel (1906, 70), who states that in general reverses are hammered more frequently. Although this in absolute numbers is true, the general impression is that hammering was applied to both reverses and obverses without any particular differentiation: Dressel B (*obv.* heavier hammered), F, G, H (*obv.* weaker), I, M (*obv.* very weak), P (*obv.* weaker), Q (*obv.* stronger), S, T, U (*obv.* stronger); the three Tarsos medallions (the first two weak on the *obv.*) and the one in Cambridge were hammered on both sides. Dressel A and R (the latter, if so only very weak) lack hammering on the reverse (or if on reverse then only very weak), while Dressel C (if on *obv.*, then weak), E, K (only weak in one spot below bust), L, N, O, and Oxford only show reverse hammering.

36. Thus Dressel (1906, 71) is wrong to say this hammering took place after striking the coins.

37. Compare Dressel (1906, 71 n. 3), who lists these examples except the one from Side (Kraay and Hirmer 1966), no. 662, pl. 192. Already known, but well illustrated: Boehringer (1972), pl. 32.12, 38.5, 39.16; Mørkholm (1991), no. 655, pl. 45 (Orophernes), and no. 619, pl. 41 (Kyme); Kraay and Hirmer (1966), no. 725, pl. 201 (Myrina, c. 189–130 BC), and no. 610, pl. 181 (Magnesia, c. 150 BC).

38. Boehringer (1999), 72–73.

39. Boehringer (1999), 73; Hill (1922, 8–9), based on a suggestion of Robinson (see his n. 19).

*Style*

Stylistic evidence hints at a connection to the Hellenistic past as some of the obverse and reverse designs clearly derive from Hellenistic prototypes. The depiction of Alexander as Herakles wearing a lion's skin (Tarsos I,<sup>40</sup> cat. 8 in gold, cat. 29-32-37 and 10, the latter though of broader, later style) derives from lifetime coins of Alexander the Great and early posthumous issues. The type used is closer to later third and early second century BC Alexanders than to posthumous Alexanders from the late second and early first centuries BC with their distinctive broader expressive features.

The same stylistic considerations are valid for the Athena with a Corinthian helmet on the obverse of the Cambridge piece: again, Alexander's lifetime coins are the inspiration for this design, here his gold staters, which continued to be produced after his death.<sup>41</sup>

The portrait head of Alexander with ram's horn and diadem (Dressel A, F, G, all from the same die, cat. 12 in gold, cat. 17-21) is obviously modeled on the famous portrait of Alexander, which Lysimachos introduced for his royal coinage and which again continued to be produced posthumously.

For the frontal bust of Alexander (Dressel C, K, L, all from the same die), we lack any comparison in both Hellenistic and Roman portraiture. The zodiacal shield of Alexander on this particular medallion is an attribute well known from Roman coins from the second century AD onward,<sup>42</sup> but it has Hellenistic predecessors in ruler panegyrics and heroic attributes<sup>43</sup> and the head itself copies the famous second century BC marble head of Alexander from Pergamon.<sup>44</sup>

A late Hellenistic or an early imperial date is appropriate for the representation of Alexander with an Attic helmet combined with various bust types (Dressel

40. But see below on details of this particular bust type and its chronological setting.

41. Vermeule (1982, 63, n. 11) names SNG Aulock nos. 1374-1379, pl. 42 from Pergamon, but these themselves derive from the same prototype.

42. Not used together with imperial portraits on coins, but isolated or combined with representations of gods and goddesses. Vulcan with the zodiacal shield of Achilles on contorniates: Mittag (1999), 95, 191, no. 30, pl. 17; Alföldi (1976), 46, 118-119, no. 30, pl. 163.2-10; 164.1-6; 221.10. On this shield, compare Brendel (1936), 272ff., esp. pl. 19, with further parallels; Hardie (1985), 11-31, esp. 24.

43. In Babylon, following Achaemenid traditions, Alexander was called "king of the world" in 331/330 BC (Price 1981, 33, n. 1; Sachs and Hunger 1998, 179, rev. 11). Demetrios Poliorketes was depicted as the sun surrounded by his starlike philoi (Athenaios 6.253D); his coat was decorated with stars and a zodiac (Athenaios 12.535F; Plut. *Demet* 41).

44. Smith (1988, 62, n. 47) and Stewart (1993, 428, figs. 128-129), both with bibliography.

B, H, I [same die], M, N]:<sup>45</sup> Roman cameos depict Augustus and Germanicus in a similar pose, obviously assimilated to Alexander, and another cameo may even be of late Ptolemaic origin.<sup>46</sup> Bronze coins of the Macedonian *koinon* AD 218–246 carry the same type.

The head of Apollo (Dressel U) is again modeled on a second century BC prototype, this time civic tetradrachms from Asia Minor.<sup>47</sup>

The bust of Athena on the medallion in the collection of J. Spiers recalls the Athena Parthenos of the classical period. This particular representation was widely copied, especially in the Roman period, notably on the famous gem of Aspasius at Rome.<sup>48</sup>

The alleged portrait of a veiled Olympias (Dressel D, R, Q [the last two from the same die], and cat. 13) derives ultimately from Ptolemaic and other Hellenistic representations of queens from the third century BC onwards.<sup>49</sup>

A second possible portrait of Alexander's mother, this time wearing a *sakkos* covering her head (Dressel O, P [same die]), is familiar from the late classical period.<sup>50</sup>

Among the reverse types too, Hellenistic prototypes might have been used: the hunting Alexander, both on his mount chasing a lion (Tarsos I and III from the same die) or on foot (Dressel F, T) encountering a boar, was a familiar topic in Alexander's own lifetime and later periods. This theme appears in a variety of media, including paintings, statue groups, reliefs and mosaics.<sup>51</sup>

Alexander as a victorious horseman over a prostrate opponent (Dressel H) derives from Greek reliefs of the fifth century BC. This image became an iconographic stereotype associated with Alexander in Hellenistic and Roman times.<sup>52</sup>

45. It is quite remarkable that the questionable Euboea medallion in Athens differs here from the other helmeted Alexanders: his frontal hair is visible below the helmet's rim, which is additionally equipped in this unique case with cheek-pieces.

46. Cameo Gonzaga: Megow (1987), 282–284, C 26, pl. 29.1, 4 (Germanicus); Kyrieleis (1971), 162–193 (Augustus and Livia). "Ptolemäerkameo": Kyrieleis (1971), 165, fig. 4 (Ptolemy II and Arsinoe II). Cameo in Berlin: Kyrieleis (1971), 189–193, fig. 17 (Caligula and Drusilla?).

47. From Alexandria in the Troad, Myrina, Milet, and Kyme. All lacking the laurel branch in front of the god's head.

48. Vermeule (1982), 71. Museo Nazionale Romano Inv. 52382: LIMC II (1984), s. v. Athena/Minerva (p. 1086, no. 13, pl. 786 [F. Canciani]).

49. For example, Berenike I, Arsinoe II, Kleopatra I, and Kleopatra Thea: M. Meyer, *Hephaistos* 11/12 (1992/1993), 107–132; Smith (1988); Kyrieleis (1975), 78–114 (see their subsequent cat. entries). In most cases, these queens wear a *stephane*, too.

50. Dressel (1906), 17, n. 3 compares this head to Kore Soteira of Kyzikos: BMC Mysia, p. 36, nos. 124–135, pl. 9.8–14.

51. Stewart (1993), 51, n. 24. The mounted, lion-hunting theme is used later, too, for representations of Roman emperors: Waddington, Babelon, and Reinach (1904), 436, no. 294, pl. 74.31, with an example from Nikaia. Mosaics: Salzmann (1982), 53–54, n. 453. Roman Sarcophagi showing Meleagros: Koch and Sichtermann (1982), figs. 184–185.

52. See, e.g., Trajan on horse in the battle relief from his Forum in Rome: Touati (1987),

Nereids riding on *ketoi* (sea dragons) (Dressel N) are common from the classical period onward and their depiction remains virtually unchanged afterward, but our example should be considered as originating from Hellenistic prototypes for stylistic reasons.<sup>53</sup> The same is valid for the nereid depicted riding on a triton (Dressel K, R, S, all from the same die).

Finally the hero Perseus saving Andromeda from a sea-monster and freeing her from chains (Dressel P) again relies on a model from the Hellenistic period.<sup>54</sup>

### 3.2 Roman Models

A number of other scenes are clearly taken from designs devised in the Roman period. A few others are only known from the medallions discussed here.

Nike driving a quadriga and holding a palm branch adorned with a *taenia* (*palma lemniscata*) (Tarsos II, Dressel A) is a special case. The goddess is rarely depicted in a four-horse chariot; instead she customarily drives a biga and holds a whip in her hand.<sup>55</sup> The depiction is closer in iconography to some Roman republican coins (Crawford nos. 280/1; 366/1–4).<sup>56</sup> There are no comparable representations in Roman imperial coinage.

Another Nike, together with Eros, holding a shield and a trophy to their right is also a unique type (Dressel B, C, I, all from the same die). In this case, the type may be a combination of iconographic motives common in Roman art of the second and third centuries AD.

A third type shows Nike inscribing Alexander's name on a shield (the Eu-boia piece), presenting a well-known Roman variation of a late classical type of

21–22, pl. 3, 11. For Roman emperors depicted riding a horse on coins, see Harl (1987), pl. 15 bottom, 16; hunting: Harl (1978), pl. 17, Bergemann (1990), 35–36, 169.

53. *LIMC* VIII (1997), s. v. Ketos, pp. 731–736 (J. Boardman). Dressel (1906, 17, n. 2) quotes an amethyst in St. Petersburg as the closest parallel.

54. *LIMC* I (1981), s. v. Andromache I, pp. 774–790 (K. Schauenburg); see coins nos. 79–81. Compare also Price (1981b), 69–75, p. 71 fig. 4 (wall painting from Pompeii), who suggests that this motive is taken from a common prototype of sculpture in the round, as the outstretched arm of Perseus supporting Andromeda is a highly unnatural pose and is reminiscent of sculpture requiring such a support for matters of stability. Besides the highly erotic undertone of this scene, Perseus is also regarded as one of Alexander's ancestors by the king himself: Arrian *Anabasis* 3.3.2.

55. *LIMC* VI (1992), s. v. Nike, p. 866, nos. 173.175–181; pp. 893–894, nos. 688–712 (A. Goulaki-Voutira).

56. A third century AD terracotta lamp, according to *LIMC* VIII (1997), p. 247, no. 109 (J. Ch. Balty) (Oxford, Ashmolean Museum Inv. 1872.1107), showing a Nike with palm branch similar to our medallions, depicts a chariot driver in his harness (without wings) evidently holding both wreath and palm branch. I am grateful to Helen Whitehouse of the Ashmolean Museum's Egyptian department for her kind help in examining this lamp.



Aphrodite,<sup>57</sup> who is mirrored in the shield of Ares. This type was widely used in the first to third centuries AD.

The nereid riding a sea-bull (Dressel D, Q [same die]) appears as a type as late as the third century AD,<sup>58</sup> although nereids as participants in the procession of Thetis originated in the classical period.

The scene of Nike presenting Alexander with his arms (Dressel E, U [same die]) is an invention of one of our anonymous die engravers, because there are no known earlier or contemporary parallels. The scene is likely inspired by representations of Thetis, who equipped her son Achilles with a new set of weapons.<sup>59</sup> The unique reverse type (Dressel G) depicts Alexander sitting on a heap of arms, behind him his mount Boukephalos, both flanked by two warriors in full armor.

The medallion carrying the type of the triumphal quadriga in frontal view (Dressel L) has already been dated to c. AD 247 (Fig. 1, see above), but there are earlier Severan parallels for this type.<sup>60</sup>

The type of Athena to the right with a column and an olive tree to her left and the serpent of Erechtheus at her feet (Dressel M) is comparable to civic coins of Athens struck under Gallienus (see above), but a renaissance in the use of representations of the Attic Athena accompanied the Second Sophistic and a reborn Panhellenism initiated by the emperor Hadrian.<sup>61</sup> The same can be said about this goddess in another scene, where she appears enthroned (Dressel O).<sup>62</sup>

Only one obverse type with the head of Alexander rendered in "pathetic" style, with a diadem in his windblown hair flying horizontally (Tarsos III), may originate in contemporary likenesses of the king. Bronze coins of the Macedonian *koinon* carry nearly identical portraits, and they are the only comparable representations

57. *LIMC* VIII (1997), s. v. Victoria (inscribing shield), pp. 242–243, nos. 28–35, pl. 169–170 (R. Vollkommer). Shield supported by palm/column, etc.: p. 243, nos. 36–40, pl. 170. For the famous "Venus from Brescia," see p. 242, no. 29, pl. 169.

58. *LIMC* VI (1992), s. v. Nereide, p. 820 (N. Icard-Gianolio and A.-V. Szabados). Dressel (1906, 49) suggested a Hellenistic prototype.

59. Alföldi (1976, 119) refers to Attic vase paintings of the early fifth century BC. Dressel (1906, 12, n. 2); cf. Alföldi (1976, 111, with n. 3–4) on parallels on Roman sarcophagi representing Amazons and others showing Hephaistos/Vulcan producing Achilles' armor. The latter is also found on contorniates (Mittag 1999, 291, no. 30, pl. 17).

60. Toynbee (1944, 71) and Vermeule (1982, 66–67) date this particular medallion's prototype earlier under Severus Alexander with regard to similar Roman medallions of this period. These medallions show slight differences in details, e.g., the direction of the horse's heads inward instead of outward. The flanking figures also lack both the palm branches of the Aboukir piece and Philip medallion. The strong similarities to the Philip medallion may be a coincidence; the general type was developed and known earlier.

61. Gmyrek (1998), 112.

62. See details below.

on coins.<sup>63</sup> Usually, Alexander's hair simply falls down along his neck, as on earlier numismatic representations.<sup>64</sup>

### 3.3 *The Macedonian Connection*

The medallions have in the past generally been related to agonistic competitions in honor of Alexander the Great in the Macedonian city of Beroia. Vermeule has challenged this geographic association (not their use as prize money for victorious athletes) and has proposed Tarsos in Kilikia or Perinthos in Thrace or Asia Minor.<sup>65</sup> Since Dressel (1906) had tried to prove strong ties among the bronze coins issued by the *koinon* of the Macedonians between AD 218 and 246 and the Alexander medallions,<sup>66</sup> I shall first reexamine the arguments for a close relationship between these two groups. A later reassessment will have to deal with the question of the medallions' possible function (section 7 below).

During the Roman period, only the Macedonian *koinon* struck numerous coins with representations of Alexander the Great.<sup>67</sup> Among the obverse portraits and reverse scenes are a remarkable number of close parallels to the gold medallions. See the Table below (section 6).

The only other portrait of Alexander wearing an Attic helmet (Dressel B, H, I [all same die], M, N [plus the Eubolia medallion]) features on bronze coins of the *koinon*<sup>68</sup> right from the beginning to their end in AD 246, as does the type with the king's windblown hair (compare Tarsos III).<sup>69</sup> The use of scenic representations on Alexander's Attic helmet in the case of Dressel M (battle)<sup>70</sup> and N (eagle and

63. AMNG III 1, nos. 323–325, 327, 329, 335, 337, 361a b–401, 463–472, 511–521, 613–702, 799, 800, 835, 836. There are no portraits in the round with this characteristic hairstyle. A windblown hairstyle in general is understood as an Alexander-like iconographic element in late Hellenistic ruler portraiture (e.g., Mithradates VI of Pontos and Diodotos/Tryphon). But there are no such Alexander portraits in the round of this period in existence. The coins in the name of Aesillas the Quaestor combine windblown hair with a portrait of Alexander without diadem but with a ram's horn, and on posthumous Alexanders of the Herakles type, this characteristic feature, now performed by the lion's skin, is only very rarely found.

64. For Alexander's portrait on coins, see Arnold-Biucchi (2006) and Dahmen (2007).

65. Vermeule (1982), p. 63, n. 12, pp. 64–65, n. 15–16, p. 66, n. 18, p. 69. He names quite a number of candidates (Perinthos, Pergamon, Ephesos, Caesarea in Kappadokia, Tarsos) but in general stresses Asia minor or Kilikia as places of origin and distribution.

66. Taking profit of Mowat (1903, 1–30), the first elaboration of this interpretation. For stylistic reasons, Arnold-Biucchi (2006, 79) agrees on Macedonia as the place of the medallions' manufacture.

67. The portrait types of the *koinon* are found in AMNG III 1, p. 15; for an overview among civic coins of the Roman period and earlier Hellenistic examples, see Dahmen (2007).

68. E.g., AMNG III 1, nos. 489–491.

69. E.g., AMNG III 1, nos. 463–475.

70. This battle scene closely remodels the one of the so-called Chigi-Relief (IG XIV 1296):



Figure 2. Macedonian *koinon*, battle scene on helmet, AMNG no. 778.1. Berlin. Münzkabinett.



Figure 3. Macedonian *koinon*, bend diadem, AMNG no. 813.1. Berlin.

Ganymede) is furthermore paralleled by rare battle scenes on his helmet depicted on some of these bronze coins (Fig. 2),<sup>71</sup> replacing the much more frequent snake or griffin.<sup>72</sup> The Artemis Tauropolos on the helmet of Dressel B, H, I (all same die) is known from Macedonian tetradrachms of the second century BC.<sup>73</sup>

Besides this use of the same iconography, stylistic similarities of the Alexander portraits become an additional argument for connecting the medallions to Macedonia: the head with ram's horn (Dressel A, F, G, from the same die), the one with windblown hair (Tarsos III), and the helmeted ones (Dressel B, H, I, from same die, and Dressel M, N) share the same physiognomic features and drawing of the facial lines, including the area around the eyes and nose. They also possess exactly the same pose with a slightly tilted neck and elaborate front in "pathetic" style. Except for the gold medallions, each of these features is only found among specimens of the bronze coinage of the Macedonian *koinon*. The nearly half-figure bust of Herakles of Tarsos I is paralleled only by a comparable bust on three specimens of the *koinon*'s bronze coins, all from the same die.<sup>74</sup> Here again the shape of the bust is identical.

In addition, another iconographic detail of the Tarsos and Aboukir medallions deserves attention. Of the two ends of Alexander's diadem, only one is depicted

Stewart (1993), 133, 162; Fuhrmann (1931), pl. 3; Hardie, (1985), 29–31, fig. 2. If Hardie is correct with his hypothesis that this relief depicts the scene of a possible Alexander shield (paralleling the zodiac/cosmos one of his idol Achilles), the appearance of this scene on Alexander's helmet would be easily understandable.

71. AMNG III 1, nos. 446, 767, 778, no. 405 (–407? same dies, but not illustrated), possibly with a horseman on the obverse bust's shield. See also AMNG III 1, no. 729.5 = SNG Tübingen 2, no. 1234, pl. 48, for Alexander on horse wearing helmet.

72. The latter usually found on Alexander's lifetime staters, decorating the Corinthian helmet of Athena: Price (1991, 29). Compare Kaiser (1986, 41–57, esp. 52–54).

73. AMNG III 1, nos. 154–155.

74. AMNG III 1, no. 764.1–3. Of the similar type AMNG II 1, nos. 762a–763, no illustrations are available.

bent in a very peculiar way.<sup>75</sup> This same characteristic is otherwise only known from a number of *koinon* bronzes with very similar portraits of Alexander (Fig. 3).<sup>76</sup> Again, this detail points to a close relationship between these two groups.

Reverses of bronze coins of the Makedonian *koinon* depicting Alexander as a horseman hunting or fighting an enemy<sup>77</sup> match comparable scenes on Tarsos I and III, the Cambridge specimen, and on Caracalla's shield on Dressel E and Dressel H respectively. The scene of Alexander being presented with his weapons (Dressel E, U [same die]) again is only otherwise known from coins of the Macedonian *koinon*, although here he is already wearing his armor.<sup>78</sup>

The enthroned Athena feeding a serpent on Dressel O is found on *koinon* bronzes under Gordian III.<sup>79</sup> On the bronze coins, the scene lacks the shield leaning against the back of the throne. There are numerous similar representations, popular in the second and third centuries AD and known especially from Thrace, Asia Minor, and a few imperial issues, which in contrast always show this protective device.<sup>80</sup> The throne's design on the bronzes seems to be a simplified version of the one on Dressel O.

The single lion walking to the right or left, so prominent on the smaller medallions (cat. 1.5–6, 8–9, 17–20, 22–36), is familiar from early royal Macedonian

75. Only the frontal-bust Dressel C, K, L shows both diadem ends, while the portraits in profile are restricted to one. Only the piece from Tarsos with an alleged portrait of Alexander's father Philip lacks this sharply bent diadem.

76. Dressel (1906), 80, n. 1. Bent diadem ends: AMNG III 1, no. 373 (Oxford); AMNG nos. 554.2, 561.1, 578.1 (Cambridge); AMNG nos. 518.1, 541.2, 568.1, 600.1, 620.3, 810.1, 838.1 (London); AMNG nos. 354.2, 619.1, 661.2, 810.2 (Paris). Two diadem ends are very seldom represented: see, e.g., AMNG no. 798.1 (Oxford), AMNG no. 604 (Cambridge), AMNG no. 641.1 (London), and possibly AMNG no. 473.5 (Paris). The ends are more curved in the case of AMNG no. 595.1 (London). Only AMNG no. 838.2 (Paris) shows both ends of the diadem as usually employed with the emperor's laurel wreath on imperial coins.

77. Hunting: AMNG III 1, nos. 311, 370, 370a, 419, 420, 442b, 558b, 643. To left: nos. 724–726 (lion). With dog: AMNG III 1 no. 560. Fighting: AMNG III 1 nos. 348, 418, 705, 723, plus no. 418 = SNG Copenhagen no. 1363, pl. 35 (wrongly described in AMNG). For the numerous variants of the horseman type, see AMNG III 1, 16–17.

78. AMNG III 1, nos. 393, 393a. See Gaebler (1906), 14, pl. 1.19. On one contorniate, Alexander has already been given his weapons and Nike has left the scene: Mittag (1999), pl. 15, die 11..

79. AMNG III 1, nos. 546 and 719, pl. 4.21.

80. For interpretation, see Gmyrek (1998), 109, 112, 116, esp. p. 109, fig. 29 (medallion of AD 159). Rudzicka (1915), 19, no. 63 (Iulia Domna), 39, no. 209–212, pl. 4 (Caracalla); Rudzicka (1932/1933), 107, no. 329 (Sept. Severus), 150, nos. 577–578, pl. 3.2 (Caracalla), 183, no. 770 (Plautilla); Kroll (1993), 155, nos. 348–349, pl. 20 (period VI from AD 264–267); SNG Aulock, no. 1336, pl. 41; Waddington 148, pl. 70.14; *ibid.* 214, pl. 72.13; Schmidt-Dick (2002), 77, Minerva f5A/02 pl. 31 = RIC IV 1, pp. 321, 335, nos. 58, 145, 148; Gneecchi (1912), 3:32, no. 105, pl. 150).

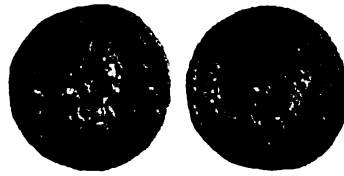


Figure 4. Macedonian *koinon*, bust/lion, AMNG no. 816.1. Berlin. Münzkabinett.

coinage and from bronze coins of the *koinon* (Fig. 4); it is also frequently found on other coins, especially in Thrace.<sup>81</sup> Club, bow, and quiver (cat. 21 and 37) are known from Alexander's own bronze coinage.<sup>82</sup>

Apart from those depictions of the queen's head on Aboukir medallions (Dressel D, O, P [the latter two from same die], Q, R [same die]), the coinage of the *koinon* alone shows Olympias (the queen on a *kline* awaiting Zeus Ammon in the shape of a serpent).<sup>83</sup>

A *cista mystica* (cat. 4, 12), although strongly associated with Dionysos and Attalid Pergamon,<sup>84</sup> has a Macedonian pedigree<sup>85</sup> and was favored also in Thrace and several other places.<sup>86</sup>

Further parallels are not attested by *koinon* bronzes but rather through comparison with civic coinage in Roman Thrace and Macedon, again stressing the origins of the images applied, their users, and the die engravers in this very region (see Athena with snake in similar, but slightly different representations, mostly with an additional shield).

Vermeule used the prominence of a zodiac depicted on various coins of Perinthos in Thrace as an argument for the possible production of the medallions in this city,<sup>87</sup> comparing it to Alexander's shield device on Dressel C, K, and L. But zodiacs also appear on coins of various other cities.<sup>88</sup> In all of these cases, the zodiac

81. Royal coins: AMNG III 2, p. 160, no. 6, pl. 30.6; p. 161, nos. 2–3, pl. 30.15. *Koinon*: AMNG III 1, nos. 325 (with club), 395a (with star), 396–398a (with club), 432 (with star), 433–436, 452–452a (with club), 454 (no club), 741, 781–784, 815 (with club), 816–817 (no club), 829–830, 839, 845–845a, 852–854 (with club, AD 244); AMNG III 2, no. 57, pl. 5.16. Cities in Thrace, Macedon, and neighboring regions used the same motif: Pick (1898), 268, nos. 914–915, pl. 20.1 (Markianopolis); Rudzicka (1915, 64, no. 399, pl. 9; 1932/1933, 179, no. 741, pl. 8.8). Bronzes of Lysimachos: Mørkholm (1991), pl. 11.183 and 184.

82. Price (1991), 31.

83. And again later contorniates.

84. This argument is used by Vermeule (1982), p. 63, n. 11–12, p. 69.

85. AMNG III 1, nos. 361, 399–400, 437, 453, 528, 585–587, 742, 785, 831–832 (the latter two of AD 244), 857 (AD 246).

86. Pick (1898), 252, no. 804, pl. 20.29 (Markianopolis); Rudzicka (1932–1933), no. 815, pl. 9.4.

87. Vermeule (1982), 63–64.

88. RPC VII, no. 44 (Sardis); SNG Switzerland I Suppl. 1, no. 390 (Eirenopolis/Kilikia);

represents a divine attribute, often depicted on a shield held by a god or goddess or as an isolated motif decorating the whole coin. There is no reason to believe that there was any exclusive relationship between these gods and their astrological device or that Alexander's Zodiac-decorated shield should be considered a reference to a specific city. Alexander's frontal bust of Dressel C, K, and L remains a unique example of a ruler portrait lacking any direct comparison with surviving archaeological and numismatic material. Alexander's zodiac originates in the general idea of a world ruler, not astronomical particularities favored by certain cities.<sup>89</sup>

#### 4. One or More Issues of the Aboukir Medallions?

Design, style, and tooling support the view that the medallions from Tarsos and Aboukir and related smaller pieces have a common background. A closer look at these three groups reveals a more complex structure. How do we assess the relationship between these three groups and with regard to the individual pieces within each hoard?

Comparison of the medallions from Tarsos and Aboukir shows some differences between these two groups. The group from Tarsos is larger physically than any other of the twenty medallions from Aboukir and should be regarded as constituting a distinctive issue. In addition, Dressel stressed that only the pieces from Tarsos lack the characteristic circular lines (see section 3.1, above) of the Aboukir medallions and the filing of their borders.<sup>90</sup> In contrast to the claims of Dressel, these circular lines, which are thought to be related to the poststriking process, do not appear consistently in the group from Aboukir. Dressel A, B, D, F, H, N, O, and P lack this characteristic.<sup>91</sup> There is no obvious relationship between pieces that have been incised or hammered.

Recent metal analysis on the medallions of the Gulbenkian Museum and five specimens in Berlin has produced further evidence.<sup>92</sup> Examining the fineness of

Künker Auction 115 of 25 Sept. 2006, lot 733 (Aigai); Ziegler (1993), nos. 660, 667–671 (Anazarbos); *BMC Phoenicia*, p. 187, no. 265 (Sidon). There is no testimony from Macedonia.

89. On earlier Greek (mythic) rulers as owners of cosmic shields, see Hardie, (1985), 11–31; L'Orange (1953), esp. 30.

90. Dressel (1906), 59, 72. Dressel saw eight of these medallions himself, the remaining as photographs or casts: Dressel (1906), 12, 66 (the Berlin pieces Dressel A to E plus L, R, T).

91. Circular lines are found with the following medallions from Aboukir: Dressel C (*obv.* and *rev.*), E (*rev.*), G (*obv.*), I (*obv.* and *rev.*), K (*obv.*), L (*obv.*), J (*obv.*), M (*obv.*), Q (*obv.*), R (*obv.*), S (*rev.*), T (*rev.*), U (*obv.*), and the piece in Cambridge (*rev.*). Dressel K even has three different circles, each of them centering on a different point and thus not parallel to each other. The specimen in J. Spier's collection needs examination. The smaller medallions in gold and silver without exception lack incised lines. We may assume that their much smaller dimensions are responsible for this

92. Peixoto Cabral et al. (2000), 401–414. Berlin: Examined by Andrea Denker of the

these samples reveals no uniform composition. On the contrary, none of the medallions matches another, although points of gravity become obvious.<sup>93</sup> Some pieces have between 95% and 96% of gold with a silver content around 3.5% (Dressel D, O, S, U), others around 93% gold and 6% silver (Dressel B, C, H, N, F), and another group, c. 91% and 8% respectively (Dressel K, M, G).<sup>94</sup> The Gulbenkian piece Dressel P (88.3% AV, 10.7% AR) is now paralleled by Dressel A and E (c. 88% AV, 11% AR) in Berlin. These differences in fineness do not prove the production of single medallions at different times or in different workshops, but when taking into account their die combinations, point to a different conclusion.<sup>95</sup> Dressel O, S, and U, sharing the same fineness, are die linked with medallions of different percentages of content (e.g., E); the same is the case with Dressel B, H, and F, while N lacks any die link. And finally, the group of Dressel A, C, K, and G shares dies with other pieces, while M remains unlinked. Dressel P, having the lowest fineness, is linked with Dressel O. This crossing of fineness and dies leaves us with only one possibility: all examined medallions (and presumably the rest of them also) come from a single workshop, where their flans were cast and then struck within a relative short period of time.<sup>96</sup> The difference in fineness also suggests that these medallions do not originate from an official state-run workshop, which would have produced pieces with standard weights and fineness;<sup>97</sup> additional evidence comes from the fact that the legends are written in Greek, not Latin, and lack any reference to a contemporary emperor. Their die linkages and differing finenesses serve to strengthen the argument in favor of a private issue. Presumably bullion and coins provided by a private individual were used as raw material to cast these huge flans in a workshop in quite limited numbers. The difference in fineness therefore can be explained by the fact that not all flans were produced from one single batch of cast metal but rather from several portions melted down, resulting in different degrees of fineness. The dies, on the other hand, were certainly produced by a trained professional and handed over to a workshop possibly unrelated to this engraver (Fig. 5).

Hahn-Meithner Institute in Berlin in collaboration with her colleagues Zsófia Kertész and Inés Ortega-Feliu in November 2006, using the PIXE method. On PIXE in general, see Kallithrakas-Kontas and Katsanos (1998), 461–472.

93. Peixoto Cabral et al. (2000), 407, with table. Compare also data on each medallion in Appendix 1.

94. Copper and iron contents were also examined. Dressel I (94.3% and 4.7%) remains isolated, but compare Dressel D (95% AV and 4–5% AR).

95. Peixoto Cabral et al. (2000), 409–410, figs. 1 and 2.

96. Peixoto Cabral et al. (2000), 410.

97. Though the weight standard of Roman *aurei* varies considerably starting at the beginning of the third century AD, the fineness still holds up to 99% in nearly all specimens examined: Morrisson et al. (1985), 80–89, fig. 12, table IV. Only from c. AD 253 onward do fineness, too, begin to deteriorate. See also Bland (1996), 66.

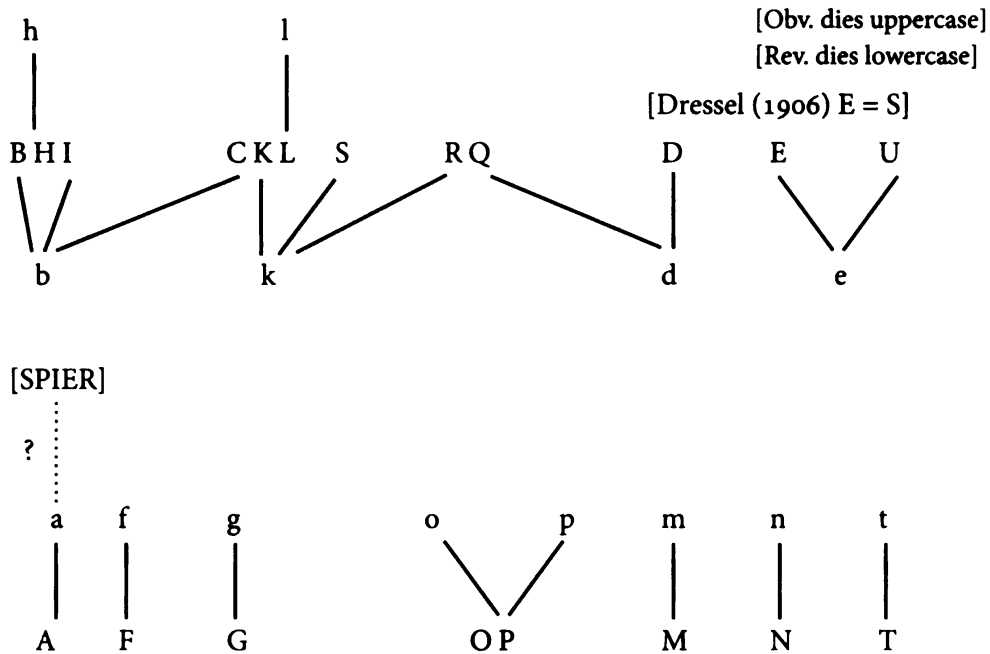


Figure 5. Die Combinations—Aboukir (20 pieces)

In view of their technical similarities and the close relationship between the reverse designs of Tarsos II and Dressel A, both the medallions from Aboukir and Tarsos probably originated from the same workshop or at least had the same geographic background. In addition, the medallions from Tarsos and from Aboukir share a die orientation of 12:00,<sup>98</sup> and the style of the portraits used, notably those of the Alexander on Tarsos III compared to the one of Dressel A, show a close relationship. The reverses of Tarsos II and Dressel A even share the same scene of Nike riding in a four-horse chariot.

Although individual medallions can be dated to specific times in the third century on iconographic grounds (see section 2), this chronological knowledge would be of limited use if the groups from Aboukir and Tarsos originated from different emissions or series produced in subsequent phases of the third century AD. Many scholars have dated these medallions to the AD 240s, but they have also argued for a slightly different historical background, thus splitting up the pieces in question.

98. All pieces in the Gulbenkian collection are oriented this way, though Dressel P and I were obviously more carelessly struck and only come close, with dies at 11:00. The five pieces in Berlin (Dressel A–E) share the same orientation, with Dressel B narrowing in at 11:00 and Dressel E at 1:00, respectively. In Baltimore, Dressel L is oriented at 12:00 and Dressel R and T are at 11:00. In general, we would expect coins and medallions of this period to have adjusted dies.



Dressel<sup>99</sup> recognized three major groups: (1) the medallions from Tarsos, (2) those from Aboukir, and (3) the Cambridge medallion from Serres. Within the medallions from Aboukir, he believed all the medallions with the exception of Dressel U and L to have been produced on the occasion of the first Olympiad in AD 242/243.<sup>100</sup> The medallion Dressel U (obverse head of Apollo), Dressel connected with a possible Pythian festival in neighboring Thessalonica, but he did not exclude it from the original series of AD 242/243.<sup>101</sup> Because of its close parallels with a Roman bronze medallion of Philip the Arab of AD 247, Dressel dated the medallion with the triumphal quadriga (Dressel L) to the second Olympiad.<sup>102</sup> Nevertheless, with the exception of the medallion from Serres now in Cambridge, Dressel concluded that all these pieces were produced by different engravers within a single workshop.<sup>103</sup>

Dressel's obvious intention was to associate the medallions' iconography with specific Alexander festivals or Olympiads in Beroia, therefore relying on different dates for some pieces or in the case of Dressel L even relocating them away from Beroia. This "problem" only surfaces if one considers these medallions to represent prize money distributed to the victors of these games. The die combinations of the medallions do not support this view: the medallions Dressel E, S, and T, with the portrait of Caracalla, are linked in two cases to separate groups of die combinations.<sup>104</sup> Although Dressel T remains isolated (as do the medallions Dressel M and N), the obverse of Dressel E shares its reverse with Dressel U (Apollo). More important is Dressel C, which links to a group of ten obverse dies sharing reverses. This high number of combinations supports the view that the Aboukir medallions were created as a whole series in one single emission. Also, the fact that twenty pieces originate from one single hoard speaks against a gradual and long period of production. We may also argue that the appearance of the remarkable frontal bust of Alexander on Dressel C, K, and L is through these die combinations linked with the Caracalla portraits, as well as the quadriga with Alexander on the reverse of Dressel I and the Apollo of Dressel U. Only Dressel M, featuring Athena and the column with the "Olympiados" inscription is not die linked. But another pattern is also shared among several medallions. Portraits of Alexander the Great and Caracalla are depicted as equipped with a spear on obverses (Dressel C, E, K, L, S, T). The shape of this spearhead on the reverses of Dressel G and M is identical.

99. Dressel (1906), 59.

100. Dressel (1906), 59.

101. Dressel (1906), 58. This because the god's head was thought to indicate a close relationship to Apollo's own festival, the Pythia, in this city.

102. Dressel (1906), 57–58.

103. Dressel (1906), 73.

104. Their reverses show Alexander being presented his weapons (E), a sea-centaur with nereid (S), and Alexander hunting a boar (T).



Figure 6. Contorniate, Alexander as Herakles. Berlin. Münzkabinett.

The medallions from Aboukir and from Tarsos should be considered as a single series of precious gold objects produced at the same place and time.<sup>105</sup> Only the medallion from Serres might not belong to this series, as its die was likely cut by another engraver. The specimen from Serres may represent an elaborate example of normally smaller silver and gold equivalents.

#### 5. Later Resurrections—Alexander's Legend on Roman Contorniates

Late Roman contorniates—bronze medallions with characteristically shaped rims from which their modern Italian name *contorniati* originates—form a distinctive group of medals limited to the city of Rome in the fourth and fifth centuries AD. They bear commemorative images of celebrated emperors, philosophers, and intellectuals. Most of the scenes are related to the world of the Circus.<sup>106</sup> Mittag has recently shown that only a small series within this group (“Kaiserserie”) might have been produced by imperial authority.<sup>107</sup> The same workshops produced the majority of contorniates to satisfy private demand, i.e., these contorniates were issued as gifts for the New Year.<sup>108</sup> Some of these medallions bear obverses or reverses related to Alexander the Great and his mother Olympias. In most cases, they carry identifying legends in Greek or Latin.<sup>109</sup>

Alexander usually appears wearing the lion's skin of Herakles (Fig. 6). While few dies were closely modeled on coins from Alexander's lifetime, in most cases these contorniates show the longish facial features typical of the style of the fourth and fifth centuries.<sup>110</sup> The portrait type of the diademed king is taken from

105. As also Savio (1994–1995, 86) argues.

106. Mittag (1999); Alföldi (1976; 1990).

107. Mittag (1999), 182–184.

108. Mittag (1999), 211–212.

109. Mittag (1999), 164–166; Alföldi (1976), 80–87, 109–111; Vermeule (1986).

110. Compare Mittag (1999, pl. 1), e.g., dies I–IV against dies VII–XI. For an AD fourth century gold pendant (sheet) with Alexander's portrait based on the Lysimachos prototype in Baltimore, see *The search for Alexander. Supplement to the catalogue* (Toronto: Royal Ontario Museum, 1983), p. 36, no. S-52; Alföldi (1990), 83, n. 14, pl. 244.3.



Figure 7. Contorniate, Olympias/Alexander with shield. Berlin. Münzkabinett.



Figure 8. Contorniate, Olympias/Alexander with shield. Berlin. Münzkabinett.



Figure 9. Contorniate, Caracalla/Olympias. Berlin. Münzkabinett.



Figure 10. Macedonian *koinon*, Alexander/Olympias, AMNG no. 367.2. Berlin. Münzkabinett.

prototypes provided by the coinage of the Macedonian *koinon*. A few pieces seem to represent rather fictitious inventions merging Alexander's portrait with the one of his successors Philip V and Perseus.<sup>111</sup>

Alexander also appears carrying a shield,<sup>112</sup> in a scene similart to the reverse of Dressel U, where Nike presents his arms to him. Much more loosely associated are representations of Alexander on horseback, which share the motif but have again styles characteristic of the fourth and fifth centuries. These are also inspired by images of the contemporary emperor as a victorious horseman.<sup>113</sup> Alexander's mother Olympias also experiences another revival, both on obverses in the familiar veiled portrait type (Figs. 7–8) and, more telling, in her infamous encounter with a serpent on some reverses (Figs. 9–10).<sup>114</sup>

Clearly, contorniates represent metallic materializations of Alexander's legend that flourished from the third century AD onward, mixing earlier (mainly third century) prototypes and contemporary interpretations of his portrait.

#### 6. The Chronology of the Medallions and *Koinon* Bronzes

The connection between the gold medallions, especially those from Aboukir, and the bronze coins of the Macedonian *koinon*, as demonstrated in section 3.3, is quite remarkable. The similarity between the two groups point to now lost prototypes from Macedonia, likely statue groups or paintings as a common source of inspiration. This seems much more probable than one group's iconography depending directly on the other.

The representations of Alexander and the known veneration of a cult to Alexander the Great suggest that statues and paintings in existence at Beroia inspired the types of both medallions and coins.<sup>115</sup> Even with portraits in the round as likely prototypes, the stylistic features of the Alexander images on the medallions and bronze coins of the *koinon* (facial line, windblown hair, elaborated front) bear witness to an interaction between these two groups. In addition, late Roman contorniates originating from the capital itself give evidence of the reuse of similar Alexander images and related reverse scenes (see section 5, above).

With the coinage of the Macedonian *koinon* dating from AD 218–246, we need to establish its chronological relationship to the gold medallions and vice

111. Mittag (1999), esp. dies XV–XVII and XIXa, XXI–XXIa respectively.

112. Mittag (1999), pl. 15, die 11. See also below on the question of authenticity.

113. Cf. Mittag (1999), pl. 15, dies 8–10, against, e.g., pl. 15, dies 123–128.

114. Mittag (1999), pl. 3, dies Olympias I–Olympias–Omphale II, and pl. 15, dies 1–7 respectively. See Fig. 9 for an example from the *koinon*.

115. Dressel (1906), 24–25: *koinon* bronzes and gold medallions with regard to the obverse type with helmet are not dependent on each other but rely on a mutual prototype, but at the same time the gold medallions date to the AD 240s. Cameos may have been used as prototypes for other scenes, such as nereids, the sea thiasos, and Perseus and Andromeda.

versa. Previous scholars argued that the Aboukir medallions were the source for the iconography of the *koinon*'s bronzes after AD 218: Dressel labeled the bronze coins of the *koinon* as popular issues of the rarer gold medallions.<sup>116</sup> For Toynbee, the bronzes are copies after the design of the medallions.<sup>117</sup> Vermeule, too, accepts that the design of the bronzes is influenced by the medallions, but this relationship is not consistent with his presumed date of production of the medallions in the reign of Severus Alexander.<sup>118</sup>

The following table shows the shared motifs and their chronological sequence of appearance within the coinage of the Macedonian *koinon*.

Aboukir/Tarsos	Koinon Bronzes
Alexander's portrait with Attic helmet (B, H, I, M, N)	AD 218–222, 231–235, 238–244, 246 (Only heads. The busts are without helmet, commencing AD 231–235)
Alexander with windblown hair (Tarsos I)	AD 218 onward
Alexander as Herakles with lion's skin (Tarsos I)	head from AD 218, bust 238–244
Alexander leading Boukephalos (G detail)	AD 218–222 (AMNG no. 302)
Alexander on horseback, hunting (Tarsos I, III)	AD 231–235, 238–244
Alexander as victorious horseman (H)	AD 231–235, 238–244
Athena on throne feeding snake in olive tree (O)	AD 238–244
Alexander with ram's horn, to left (A, F, G)	AD 238–244 (to right)
Alexander being presented his weapons (E, U)	None. But scene with Alexander seated having already received his armor. AD 231–235, 238–244.
detail of Alexander sitting on bench with his armor (on <i>obv.</i> bust of M)	see above

The following scenes of the Aboukir medallions are not found among the coinage of the *koinon*: nereids and a sea thiasos, Alexander hunting a boar, Perseus and Andromeda, Nike in a four-horse chariot (although Nike riding in a biga is well

116. Dressel (1906), 60 ("Volksausgaben"). Compare R. Mowat, *Revue Numismatique* (1903): 2–5.

117. Toynbee (1944), 71–73. She also thinks that the medallions were produced (or at least their dies made) in Rome or that (less possible) the mint's engravers traveled to Macedonia to produce the medallions on the spot. Designs and dies allegedly would have come from Rome, and the medallions would then have been struck locally. Both *koinon* bronzes and contorniates derive from (Aboukir) medallions according to Toynbee, while the alleged close correspondence of contorniates and gold medallions would support the view that the medallions were produced in Rome or by Rome mint employees. This hypothesis is certainly wrong, as the majority of the contorniates were produced without any imperial authority but as private commemoratives.

118. Vermeule (1982), 70.

known from the *koinon* and other civic coinages), and the obverse portraits of Olympias.

Although there is no obvious chronological pattern noticeable among both groups, some indication of their mutual relationship is detectable. The chronological development might indeed indicate a gradual inspiration of the coins of the Macedonian *koinon* from the gold medallions. Reverse scenes appear only during the 230s and 240s, when the production of the Aboukir and Tarsos medallions presumably took place. But main portrait types do exist among the *koinon*'s coinage as early as AD 218. It is certain now that the coinage of the Macedonian *koinon* was the first to feature a number of characteristic (obverse) portrait types of Alexander, while the medallions from Aboukir (and Tarsos) are indebted to these prototypes, combining them with additional scenes on the reverse. It is most likely that the latter in some cases are taken from cameos or paintings (e.g., the scenes of the sea thiasos or Perseus and Andromache) rather than from sculpture or comparable coin images. Another argument for the close relationship between these two groups derives from a general observation of Alexander's image on ancient coins of the Roman period. These coins were minted by individual cities. They were not imperial money from the mint of Rome. These civic coins hardly show any relation to one another in matters of the motifs employed and the style of images. In contrast, it seems very likely that every city developed an independent approach to imagining Alexander. Bearing this in mind, it is even more remarkable that the gold medallions are so closely related to the coinage of the *koinon*. This can hardly be coincidental. It must, on the contrary, originate from an appreciation of the same prototypes (statues or paintings) from the same region or place.<sup>119</sup>

Thus the coins of the Macedonian *koinon* and the gold medallions may both best be described as the result of a contemporary veneration of Alexander, derived primarily from the same prototypes. The models were almost certainly located in Beroia. There is also no reason to explicitly exclude the existence of the Alexander coinage of the Macedonian *koinon* before the gold medallions from Aboukir and Tarsos were produced.

## 7. Function, Use, and Date

Scholars have considered the medallions from Aboukir (including the Tarsos and other specimens) as prize money, so-called *Niketeria*,<sup>120</sup> distributed among the victors of athletic and other competitions in games honoring Alexander the Great.

119. Dahmen (2007), 62–63.

120. The term is seldom used in ancient sources, see *RE* XVII (1937), 318–319, s.v. *Niketerion* (K. Regling) dating them to AD 243; Liddell and Scott (1996), 1176, s.v. νικάω/νικητήριον.

Roman emperors in the first half of the third century AD are held responsible either for their production or distribution.<sup>121</sup>

This interpretation of the medallions remains questionable. The images on our medallions do not relate to any agonistic competition.<sup>122</sup> Nor are any athletic events ever depicted.<sup>123</sup> The practice of awarding prizes favors this view. Agonistic inscriptions dealing with the rules of these competitions and their prizes indicate that it was common practice to pay a certain sum of money (often in a purse) to victors. Such money prizes were almost certainly composed of contemporary coins already in circulation rather than specially produced medallions.<sup>124</sup>

There are no Niketeria comparable to our medallions known from actual finds.<sup>125</sup> Likewise, the gold pieces from Aboukir and Tarsos are not based on a common weight standard. They do not represent multiples of an imperial gold denomination. In addition, their inscriptions are in Greek and solely devoted to Alexander (and the "Philips"); there is no reference to a Roman emperor. It is therefore impossible to interpret these medallions as derived from circulating money (e.g., Roman *aurei* and even later *solidi*).<sup>126</sup> It would have been quite arbitrary to award

121. Dressel (1906), 56; Bernardi (1970), 90 (prize money with later use as talismans); Bastien (1993), 470; Leschhorn (1998), 405 (all Beroia); Vermeule (1982), 63, 69 (several places mentioned in Thrace, Asia Minor, and Kilikia, always prize money, emperor or legate responsible for distribution, "documents of Roman and Greek imperial courtly numismatic art"); Vermeule (1986), 21–22 (Severus Alexander to Philip the Arab during processions, inauguration of public monuments or games). Cf. Gagé (1975), 4–15; Savio (1994–1995, 100), agrees with Vermeule (1982, 69) on Pergamon but proposes a number of private individuals as producers. See also Touratsoglou (2008).

122. Because Apollo is depicted on Dressel U, Dressel (1906, 56–58) relates this specimen to the festivals (Phytia) at Thessalonica. Together with Dressel L (Alexander in quadriga seen from the front), because of the latter's close resemblance to a medallion of Philip the Arab, he gives these two to the second Olympiad of AD 246/247.

123. Leschhorn (1998, 403, 405) names gymnastic (boxing, possibly pentathlon) competitions and such in Beroia. In AD 243/244, there were equestrian *agones*; inscriptions give additional testimony of gladiators and animal hunts. Compare another inscription (not honoring Alexander) published by Nigdelis (1995, 170–174).

124. For example, Klose and Stumpf (1996), 102. Such rewards at Olympiads are attested at Thyateira/Lydien: Klose and Stumpf (1996), 121, no. 232 with ill. Pergamon: von Fritze (1910), 81, pl. 9.14. On such coins, the purse is a familiar motif. Prizes and rewards in general: Pleket (1975), 60–71. Daily allowances were paid to participants in order to attract professional athletes.

125. The character of so-called *brabeia* in gold known from inscriptions and awarded in other sacred crown contests remains unclear: Pleket (1975), 66, with reference in n. 71 to Moretti (1953), 247. A *brabeion* given to the victor of the Sebasteia at Naples: IGR I 449. For an overview of terms used see Petzl and Schwertheim (2006), 95–96.

126. Compare Peixoto Cabral, et al. (2000), with the weights of contemporary *aurei*.

athletes with such prizes, as the value varied with each medal's weight (not taking into account their reduced fineness). How would a first (or second if awarded) place have been differentiated?<sup>127</sup> It also seems neither appropriate nor reasonable that one individual alone should have been rewarded with all twenty of the pieces from Aboukir at once.<sup>128</sup>

Possibly the smaller medallions in gold and silver (see catalogue) and their use as amulets<sup>129</sup> pushed forward the idea of creating larger and more precious pieces in gold. More probably, their production followed the example of the medallions from Aboukir and Tarsos. An individual may have hired an able die engraver (who may possibly have been engaged in gem production) and had medallions struck on flans produced from privately owned gold. The place of production and distribution must have been Macedonia, as the iconographic parallels with the *koinon*'s coinage suggest, while the die cutter most certainly originated from one of the leading monetary centers in the area. Either Thrace with Perinthos or western Asia Minor with cities like Pergamon, Smyrna, and Ephesos are likely candidates (already suggested as a possible mint for these medallions), but also Rome, with its experience in the production of imperial medallions, remains an option.<sup>130</sup>

The individual responsible for the medallions' production most certainly played an important role in the *koinon*'s political life and had the resources needed at hand. These qualities—political influence, close ties to the *koinon*, and material wealth—are found together in the office of the Makedoniarchos, the high priest of the province and leading figure in the provincial imperial cult, who presided over the festivals and games at Beroia. One of the Makedoniarchs around c. AD 220–235 might have had these medallions distributed among high-ranking state officials or courtiers of the emperor in an attempt to make his session in office and “his” games even more impressive and memorable. Such manifestations of Alexander's legend in gold certainly would have made an impression on recipients and plenty of related iconography and prototypes was available. The medallions were based on the already familiar bronze coinage of the *koinon*, which may have been partly funded through “private” *leiturgia* and which also venerated Alexander and

127. Prize money for other than first places: Buhmann (1975), 7, n. 1. In Oinoanda, C. Iulius Demosthenes in AD 124 awarded first and second prizes: see Wörrle (1988), 8–9, 234–236.

128. If the victor is indeed identical with the last owner. Here we must consider Vermeule's (1982, 69) suggestion, whose idea of an ancient “goldfinger” finds my favor.

129. This view is supported by ancient sources describing the use of Alexander's image as an amulet in the Later Roman period: H. A. *The thirty pretenders* 14.3–6, esp. 6; and Dio Chrysostom, *Ad illuminandos catechesis* 2.5. Compare Savio (1994/1995, 100).

130. See Touratsoglou (2008), who discusses Rome as a production site for the medallions.



showed loyalty to the Severan dynasty. From this perspective, the medallions represent magisterial *donativa*, not agonistic *niketeria*.

The reverse of Dressel M with an Attic Athena Promachos and a column inscribed "Olympiados" has been taken as hard dating evidence. Mowat paralleled the three lines ΟΛΥΜ/ΠΙΑ/ΔΟC with *koinon* bronzes bearing a date according to the Actian Era. The coins are inscribed with the Actian date EOC (275) on their reverses, thus indicating production in AD 243/244. According to Mowat, who was followed by Dressel, our medallion needs to be read as ΟΛΥΜΠΙΑ "the Olympiad" and ΔΟC the year 274 of the Actian Era (= AD 242/243).<sup>131</sup> This initially intriguing interpretation has been challenged for various reasons. Vermeule<sup>132</sup> pointed out that a smaller gold piece in Oxford (cat. 4) reads "Olympiados" in one line and therefore the last three letters cannot be interpreted as a date. We can therefore not agree that the same sequence of letters would have a very different meaning in these two cases.

Furthermore, among numerous Roman provincial coins naming an Olympic festival (as well as Pythic, Actian, or Isthmian games), there is no case in which these Olympiads are combined with a date relating to any kind of era. On the contrary, they are only numbered (e.g., first, second, third Olympiad). Olympiads subsequent to the first are indicated by a numeral, as in the case of the second Olympiad on the *koinon* coins under Philip I.<sup>133</sup>

By locating our medallions in Macedonia and Beroia and placing them chronologically between AD 211/212 and 246, we may by means of historical probability narrow the period of production. Caracalla, although notorious for his veneration of Alexander the Great,<sup>134</sup> makes a highly improbable candidate. Yet, if he had issued these medallions, we would have expected some evidence of a reaction on the coinage of the Macedonian *koinon*. During his reign there is no such reference to Alexander on coins in Macedonia, nor do we know of any Macedonian games in his honor at this time. On the other hand, the appearance of Caracalla's portrait on Dressel E, S, and T speaks against their production under Gordian III or Philip I. For these emperors, who were not themselves members of the Severan dynasty

131. Dressel (1906), 55–56. Head (1911, 242) supports this view, as does Leschhorn (1998), 402. For an opposing view, see Burell (2004), 196.

132. Vermeule (1982), 69.

133. See *AMNG* III 1, p. 22, and nos. 856, 871.

134. He seems to have inaugurated the so-called *Alexandreia* in Philippopolis in Thrace, as coins give testimony of these games: Leschhorn and Franke (2002), 34–35, s.v. ΑΛΕΞΑΝΔΡΙΑ and ΑΛΕΞΑΝΔΡΕΙΑ. See also the Thracian *koinon* on whose coins "Alexandreia" are mentioned but without representations of Alexander. For Caracalla's 'Alexandermania,' which began during the reign of his father around AD 197, see Salzmann (2001), 173–191; Espinosa (1990), 37–51. Cf. Dahmen (2007), 35, n. 301.

and certainly claimed no relation to Caracalla, it simply would have made no sense to feature this particular predecessor.<sup>135</sup> There is in consequence no evidence for the veneration of Caracalla during their reigns.<sup>136</sup>

In contrast, Macrinus and his son Diadumenianus (AD 217/218) were aware of Caracalla's popularity within the army and approved honors for him. Nevertheless, in Caracalla's lifetime, there is no evidence for either Alexander festivals in Macedon or any representation of him on the coinage of the *koinon* under these emperors. The recutting of dies by adding a reference to the newly gained neocorate under Macrinus clearly illustrates how fast a provincial body could react to privileges recently granted by the emperor.<sup>137</sup> Had Macrinus given orders to distribute medallions (or approved their production by local authorities), we would expect some kind of change on the *koinon*'s coins as well.

This leaves us with two possible candidates, both members of the Severan family and claiming to be sons of Caracalla: Elagabalus and Severus Alexander. For them, it would make sense to stress their relation both to Caracalla and his hero Alexander. Under Elagabalus, the Macedonian *koinon* inaugurated its coin issues with images of Alexander. Imperial portraits on the obverse become rare henceforth. Alexander takes over on the obverses, while the reverses depict scenes related to him or national and agonistic themes.<sup>138</sup> Severus Alexander, on the other hand, has an even more impressive record of venerating Alexander.<sup>139</sup> It is also during his reign that we possess historical evidence for the existence of Alexander festivals (so-called *Alexandreia*) in Beroia. Besides the testimony of coins identifying the games at Beroia and their procedures,<sup>140</sup> inscriptions set up by the *Make-doniarchos* and victorious athletes name these *Alexandreia* only from the period

135. Furthermore, they also had no special relation toward Beroia, where neocorate status only appears for the first time under Macrinus. Cf. Vermeule (1982, 67), who has a similar view.

136. Inscriptions mentioning *Divus Antoninus* (Caracalla) after his death are restricted to the period AD 218–235, see Fejfer (1992), 209–213, 216–217; Mastino (1981), 78–80. Inscriptions after AD 217: Mastino (1981), 143–146. Post AD 235: *IGBulg* III no. 884 = *AE* 1907 no. 48 = *IGR* I no. 1481 of c. AD 250–260 and *CIL* VI no. 1682 from AD 334. There are no posthumous honors for Caracalla recorded on behalf of Gordian III or Philip the Arab.

137. *AMNG* III 1, pp. 12–13 and nos. 298.1 and 2 (the latter is same dies as no. 299.2).

138. *AMNG* III 1, pp. 14–18 with table of *obv.* and *rev.* types.

139. Dahmen (2007), 37, n. 330; Vermeule (1982), 61, with references. On this phenomenon in general see Salzmann (2001), 173, n. 1.

140. *AMNG* III 1, nos. 320 (*obv.* Gordian III), 795–800 (Olympia), 801 (Olympia *Alexandreia*), 856, 871 (second Olympiad in Beroia). During the AD 240s, with the additional title Olympiad but no longer part in the formula of an inscription of AD 252: Velenis (1999), 1319–1320, no. 1.

of Severus Alexander onward.<sup>141</sup> Summing up, it is during the reign of Severus Alexander that we should place the production of the gold medallions.

### 8. Conclusion

The medallions from Tarsos, Aboukir, and similar smaller pieces constitute a corpus of Alexander-related iconographic material unrivaled in antiquity. They give evidence of a growing cultural self-awareness within Macedonia and a general "Alexandermania" in the third century AD. The following points can be made: (1) The iconography employed has links to the coinage of the Makedonian *koinon* and to the games at Beroia, making this city the very likely place of origin for the gold medallions. (2) The period of the Severan dynasty, most probably the reign of Severus Alexander (AD 222–235), witnessed the production of the medallions. (3) The medallions were likely made privately rather than by an imperial mint, given their use of Greek legends, absence of references to the emperor or agonistic contests, and their metallic content. If this is so, then it rules out the use of these medallions as prize money. (4) While the large medallions in gold (including the specimens in Cambridge and the J. Spier collection) were possibly given as presents to high-ranking visitors and officials, the smaller pieces in gold and silver might point at a less prominent audience at Beroia (*Auswurfgeld*). The pieces produced from sheet metal are certainly not products of this series but are rather improvised contemporary imitations based on their example. These were mainly used as talismans and appear in grave finds (*danakes*). The two pieces with a grazing horse on the reverse (cat. 10 and 38) remain isolated.

In this author's opinion, the high priest of Macedonia likely ordered the production of the gold medallions of Tarsos and Aboukir, given their likely date and place of origin at Beroia, the center of games to Alexander the Great. The iconography referring to Alexander the Great is also consistent with this conclusion.

There certainly is need for further research and discussion. The exact sequence of issue for the gold medallions in comparison to the bronze coins of the *koinon* (the thesis here is "*koinon* first") will have to be the subject of future research. We would also like to know more about the role of contorniates as a medium for images of Alexander and their contribution by transporting prototypes from the Hellenistic and Roman imperial period to late antiquity. Finally, we would like to know more about the last owners of the precious hoards from Tarsos and Aboukir and the circumstances surrounding their burial.<sup>142</sup>

141. See Leschhorn (1998), 401, e.g. *IGR* I. no. 802 and two inscriptions naming the Makedoniarchos as the Agonothetes of the *Agon Alexandreiou*: Leschhorn (1998), 403 = Touratsoglou (1970), 280–290 = *AE* (1971), nos. 430–431 of AD 229 and 240.

142. For a suggestion on possible historical backgrounds, see Touratsoglou (2008).

## Excursus: Missing Medallions?

The questionable and undocumented discovery of both hoards eventually raises suspicion as to whether the twenty medallions from Aboukir and three from Tarso known today may really represent the total number of those medallions in existence in antiquity. Dressel had already made this point in discussing similar representations of Alexander and Olympias on late Roman contorniates (Figs. 6–7).<sup>143</sup> In one case,<sup>144</sup> Alexander is shown sitting on a chair and holding a shield decorated with the same depiction of Achilles and Penthesileia as on one of the medallions from Aboukir. On Dressel E, Nike presents helmet and shield to Alexander, while on the contorniate Alexander has already received Nike's gift and she has left the scene.<sup>145</sup> Possibly this contorniate attests to another comparable gold medallion, one showing the full sequence of events. On the other hand, we cannot be sure that the contorniate type is not the result of an abbreviation of the original design.<sup>146</sup>

The presence on Aboukir medallions of a number of nereids as part of a naval procession (Dressel D, K, N, O, Q, R, S), but never their leading figure Thetis carrying weapons and armor of Alexander-Achilles, could be the effect of yet another loss.<sup>147</sup> But again, one may argue that it is always Nike presenting arms to Alexander (Dressel U, E) and not Thetis.

The Athena Parthenos of the cut medallion in the J. Spier collection, with its obvious signs of reuse as *Hacksilber* may not only testify to the potential fate of other specimens but may even provide another obverse type.<sup>148</sup> Vermeule names portraits of Septimius Severus and imperial women as other possibilities.<sup>149</sup> Finally, in light of the representations on the *koinon* bronzes, Dressel also expected a

143. Dressel (1906), 83–85, pl. 3.1.

144. Mittag (1999), pl. 15, die 11.

145. This case serves also as the final proof for the medallion's authenticity. The contorniate in question was not yet known in 1902, but was depicted even in an erroneous earlier drawing, which misunderstood the shield device (gorgoneion instead of Achilleus and Penthesileia). Any potential forger would certainly have relied on such "prototypes" and have come up with products quite different from our medallions. Cf. Dressel (1906), 83–85, pl. 3.1–2, and 37, n. 2. The same motif appears on a chryselephantine shield from the "tomb of Philip," see Dahmen (2007), 96–97, n. 337. Further research on this parallel is clearly needed. The holy shield from Troy that Alexander took from the sanctuary of Athena and that later saved his life might play a role here (Arrian *Anabasis* 1.11.7; 1.12.2, 6.10.2). Posterity would understand the motif as an allegory of the conqueror of Asia.

146. Speculative and hard to prove is the use of model books.

147. Dressel (1906), 49.

148. Cf. Vermeule (1982), 71.

149. Vermeule (1986), 23.

gold version of Alexander's bust type carrying a spear in profile as well as a depiction of Olympias on her *kline*.<sup>150</sup>

To close this discussion, it seems very possible that there were more medallions whose design we are now able to reconstruct in broad terms. There is actually no way to come to a final solution other than through a new find of more medallions.

### CATALOGUE OF MEDALLIONS FROM ABOUKIR, TARSOS, AND RELATED MATERIAL

In what follows, the Tarsos medallions are numbered I–III; the Aboukir medallions are identified with letters A–U according to Dressel, and the smaller pieces with Arabic numerals. The name of the authority responsible for a measurement is given in square brackets; die axis and other data without brackets was taken by the author.<sup>151</sup>

A note on legends: all are in Greek letters and found on the reverses. Both the medallions from Tarsos and Aboukir combine Alexander's name and the king's title (*basileus*) whenever his name appears. With the exception of Dressel L, the legend is always given in the nominative case wherever Alexander appears on the reverse in person; on other pieces, the genitive case is used (Dressel 1906, 52–53, 81). The Cambridge specimen gives only his name (with round *epsilon*), while the Athens "Niketerion" has a square *epsilon* and presents the king's title written on a shield. Those pieces with purely mythological scenes (sea-thiasos, Perseus and Andromeda, but not Athena, e.g., Dressel O), are often combined with an obverse featuring Olympias, but lack any legend. An exception is Dressel M with Athena and Alexander, which reads "Olympiados" on a column. The legend "Basileon Philippon" of Dressel G remains enigmatic. It has been suggested that it refers either to Macedonian kings of this name (i.e., Philip I and Philip II, Alexander's predecessors) or the Roman emperor Philip the Arab (Dressel 1906, 53, n. 2; Toynbee 1944, 70, n. 2).

Of the smaller pieces not originating from these two hoards, Alexander's name is always given in the genitive case and without title whenever it appears. Both round and square letter forms are represented. Nos. 4 and 13 bear a legend referring to Olympias.

Letter forms: the *epsilon* on the pieces from Aboukir and Tarsos is always round. The *omega* is mostly written as Ω; only Tarsos II and Dressel A use Ω (Toynbee 1944, 70, n. 2, 51); the use of other letters such as Ξ and Υ varies.

<sup>150</sup> Dressel (1906), 61, 65.

<sup>151</sup> In the catalogue, the following abbreviations are used that differ from those elsewhere: Bastien = Bastien (1993); Bernardi = Bernardi (1970); Dressel = Dressel (1906); McDonald = McDonald (1899–1903); Papisca = Papisca (1999); Peixoto Cabal = Peixoto Cabal, et al. (2000); Savio = Savio (1994–1995); Svoronos = Svoronos (1907).

## Tarsos

- I Tarsos. Paris. Cabinet des Médailles Inv. F 1671. 98.65 g, 67 mm [Bernardi; Savio]; 68/65 mm, 98.65 g [AMNG]; 12 h.  
*References:* AMNG III 1, no. 873; Svoronos pl. 8.1; Bernardi p. 81, no. 1, pl. 1.1; Savio p. 74, no. 1; *Cat. Alexander* p. 30, no. 9 with ill.; Papisca pp. 861–862 fig. 1.  
*Obv.:* Bust of Alexander (Bernardi) or of Herakles (Savio) with lion's skin seen from the back to right.  
*Rev.:* Alexander in armor with chlamys on horse to right hunting lion with spear. In exergue, ΑΛΕΞΑΝΔΡΟC; on left, ΒΑCΙΑΕΥC.  
 For *rev.*, compare AMNG nos. 419, 411.2 (BMC Macedonia no. 102) in London and AMNG no. 370.1 = SNG IV no. 2253 in Cambridge.
- II Tarsos. Paris. Cabinet des Médailles Inv. 1673. 93.85 g, 67 mm [Bernardi; Savio]; 67/64 mm, 93.85 g [AMNG]; 12 h.  
*References:* AMNG III 1, no. 874; Svoronos pl. 8.3; Bernardi p. 81, no. 2, pl. 1.2; Savio p. 74, no. 2; *Cat. Alexander* p. 32, no. 11, with ill.; Papisca pp. 862–863, figs. 3–4.  
*Obv.:* Cuirassed bust of Philip II with diadem in three-quarter view to left. On cuirass, an eagle of Zeus fighting a giant on an aegis. On each shoulder clasp, Nike carrying a shield. (AMNG 192 identifies bust as an idealized portrait of Caracalla).  
*Rev.:* Nike in quadriga to right, holding palm branch with taenia in her left hand. On carriage, possibly representation of a human figure, but nearly completely covered by horse's tail. On left, ΒΑCΙΑΕ; above, WC; in exergue, ΑΛΕΞΑΝΔΡΟΥ.
- III Tarsos. Paris. Cabinet des Médailles. Inv. F 1672. 110.3 g, 70 mm [Bernardi; Savio]; 110.3 g, 68/70 mm [AMNG]; 12 h.  
*References:* AMNG III 1, no. 872; Svoronos pl. 8.2; P. Moreno, Lisippo. *L'arte e la Fortuna. Cat. Rome* (1995), p. 177, fig. 4.23.2; Bernardi p. 81, no. 3, pl. 1.3; Savio p. 74, no. 3; *Cat. Alexander* p. 31, no. 10 with ill.; Papisca pp. 861–862, fig. 2.  
*Obv.:* Head of Alexander with flamelike hair to right, head slightly turned up.  
*Rev.:* Lion hunt as on Tarsos I, possibly the same die (Bernardi), certainly same die (Savio 74).

## Aboukir

- A Aboukir. Berlin. Münzkabinett Acc. 1903/873. 112.66 g, 54 mm [Bernardi]; 54–54.5 mm [Dressel; Savio]; 12 h.  
*References:* Svoronos pl. 9.1; Bernardi pp. 81–82, no. 4, pl. 2.4; Savio p. 78 A, pl. A 1–2; Dressel p. 7 A, pl. 1 A.  
*Obv.:* Diademed head of Alexander with ram's horn to left, head slightly turned upward, gazing to heaven.

*Rev.*: Nike in quadriga to right, holding palm branch with taenia in her left hand, in her right, reins. On left, BACIA-EWC; in exergue, ΑΛΕΙΑΝΔΡΟΥ.

For same motif but different die; see reverse of Tarsos II. Omega in form of Ω (as in case of Tarsos I–III, not Ω as rest of Aboukir. Border filed.

*Metal analysis*: *obv.* 88.5% AV 11.5 AR, *rev.* 87.3% AV 12.7% AR (error margin 3 resp. 5% for each metal).

- B Aboukir. Berlin. Münzkabinett Acc. 1905/1. 105 g, 60 mm [Bernardi]; 105.06 g, 59–60 mm [Dressel; Savio]; 11 h.

*References*: Svoronos pl. 10.1; Bernardi p. 82, no. 7, pl. 3.7; Savio p. 78 B, pl. A 3–4; Dressel pp. 8–9 B, pl. 1 B.

*Obv.*: Cuirassed bust of Alexander with coat draping his shoulder in three-quarter view to left. He is wearing an Attic helmet without cheek pieces and a high crest (decorated by a sphinx at its base). On the side of the helmet, an Artemis on horse to left (Dressel 8: Artemis Tauropolos); head is slightly moved forward but not turned up. Doublestruck.

*Rev.*: Nike wearing a chiton to right, left foot on helmet, pointing with her left hand at oval shield, which she holds with her right. Shield is held by a winged Eros turned left. On the shield, male figure in loincloth turned left and woman turned right. Above both figures, two lines indicating a curtain (?) (Dressel pp. 8, 44–45: Alexander and one of his wives). On extreme right, *tropaion* with double axe, four oval shields, armor with sword and coat, helmet, quiver, and two bows with one bow case each. On the ground, two sitting captives; on left, a bound man with Phrygian cap and trousers; on right female with coat, her left hand supporting her chin (Dressel 8–9). On left, BACI-ΑΕ; above, ΩΣ - ΑΛΕ; on right, ΞΑΝΔΡΟΥ. Rim filed.

*Metal analysis*: *obv.* 93% AV 7% AR (error margin 3 resp. 7%), *rev.* 93.7% AV 6.3% AR (error margin 3 resp. 8%).

- C Aboukir. Berlin. Münzkabinett Acc. 1907/230. 84.30 g, 56 mm [Dressel; Bernardi; Savio]; 12 h.

*References*: Svoronos pl. 11.1; Bernardi p. 83, no. 10, pl. 4.10; Savio p. 78 C, pl. B 3–6; Dressel pp. 9–10 C, pl. 2 C; Bastien, 308–309, 469, pl. 254.

*Obv.*: Facing cuirassed bust of Alexander wearing a diadem with round shield (only part visible) and spear on left shoulder. Head slightly turned to his left and eyes gazing upward. Hair with anastolé and short whiskers visible on his left cheek. On shield, naked female bust seen from the front, holding a mantle above her head (Dressel p. 9, n. 1: Gaea), above and circled by six stars (always two by two), the confronted heads of Helios and Selene on crescent in profile. Above along the rim of the shield, five signs of the zodiac from left to right: aries, taurus, gemini, cancer, and leo (only back visible). On Alexander's armor,

a youthful giant. On right shoulder clasp: Athena in peplos with spear to right, and aegis, plumed helmet and oval shield (Dressel 10, n. 1).

*Rev.*: As B (Savio p. 78; Dressel p. 10).

*Metal analysis*: *obv.* 93.4% AV 6.6 % AR (error margin 3 resp. 8%), *rev.* 92.7% AV 7.3% AR (error margin 3 resp. 7%).

- D Aboukir. Berlin. Münzkabinett Acc. 1907/229. 81.86 g, 58 mm [Dressel; Savio]; 81 g, 58 mm [Bernardi]; 12 h.

*References*: Svoronos pl. 13.1; Bernardi p. 84, no. 15, pl. 6.15; Savio p. 79 D, pl. B 1–2; Dressel pp. 10–11 D, pl. 2 D.

*Obv.*: Draped, diademed, and veiled bust of Olympias in three-quarter view to left; right arm adorned with bracelet, left hand holds a scepter.

*Rev.*: Nereid riding on a sea-bull to left, left upper arm, right wrist and both ankles with brooches; in left hand reins, amid the waves two shells and two dolphins (Dressel p. 11).

*Metal analysis*: *obv.* 95.3% AV 4.3% AR (error margin 3 resp. 11%), *rev.* 94.8% AV 5.2% AR (error margin 3 resp. 9%).

- E Aboukir. Berlin. Münzkabinett Inv. 1908/3. 65.12 g, 47–48 mm [Dressel; Savio]; 65 g, 48 mm [Bernardi]; 1 h.

*References*: Svoronos pl. 14.3; Bernardi p. 86, no. 22, pl. 7.22 (uncertain whether Dressel E or S illustrated); Savio p. 79 E, pl. B 4–5; Dressel pp. 11–12 E, pl. 2 E.

*Obv.*: Cuirassed and laureate bust of Caracalla seen from the front with sword and shield to left. Over his shoulder, a spear (its point similar to the one of Dressel C). Breastplate with head of Medusa, shoulder clasp ornamented. From his right shoulder hangs a *balteus*, the sword itself with hilt in form of an eagle (an emperor's sword). Around his waist, the *cingulum militare* (belt). The shield bears the diademed head of Alexander in profile to the left, above Alexander on horse hunting a lion.

*Rev.*: Alexander, diademed and with a garment around his hips, sitting to the right on a bench. In front of him, Nike turned left, her left hand supported by a round shield, her right hand holding an Attic helmet. Shield decorated with Achilles slaying Penthesileia. On left side, BACIAEVC; above, AΛEIANΔPOC.

*Metal analysis*: *obv.* 88.1% AV 11.9% AR, *rev.* 88.6% AV 11.4% AR (error margin 3 resp. 5%).

- F Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2428. 54 mm [Bernardi]; c. 54 mm [Dressel; Savio]; 96.44 g, 54 mm [Peixoto Cabral]; 12 h.

*References*: Svoronos pl. 9.2; Bernardi p. 82, no. 5, pl. 2.5; Savio p. 79 F [ex coll. Sinadino, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel p. 13 F.

*Obv.*: As A, same die (Dressel p. 13).

*Rev.*: Alexander in chlamys and boots fights a boar with his spear to right. A tree



and two dogs on the right. At base of tree a coiled serpent. On left, ΒΑCΙΑΕVC; above, ΑΛΕΞΑΝΔΡΟC (Dressel p. 13, n. 1 refers to similar motifs on contorniates and gems but fails to mention the serpent).

- G Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2426. 97.50 g, 55 mm [Dressel; Bernardi; Savio]; 97.49 g, 54 mm [Peixoto Cabral]; 12 h.  
*References:* Svoronos pl. 9.3; Bernardi p. 82, no. 6, pl. 2.6; Savio p. 79 G [ex coll. Singa, Alexandria]; Peixoto Cabral [ex coll. James Loeb]; Dressel p. 13 G.  
*Obv.:* As A and F, same die (Dressel p. 13).  
*Rev.:* Alexander, naked, sitting to left on heap of weapons and armor. Behind him, Boukephalos with a saddlecloth made of panther skin. On both left and right a (beardless?) warrior in full armor with Attic helmet, spear, and shield. The one on the left is carrying his spear over his shoulder, the one on the right places its foot on the ground; above, ΒΑCΙΑΕΩΝ; in exergue, ΦΙΛΙΠΠΩΝ.  
 Dressel (1904, 53, 69) and Toynbee (1944, 70): Alexander and his two ancestors Philip I and II. Head p. 241: These two rather than Emperor Philip the Arab and his son.
- H Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2429. c. 46 mm [Dressel; Savio; Bernardi]; 52.04 g, 46 mm [Peixoto Cabral]; 12 h.  
*References:* Svoronos pl. 10.3; Bernardi p. 83, no. 9, pl. 3.9; Savio pp. 79–80 H, pl. A 5 [obv., ex coll. Sinadina, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel p. 13 H, pl. 1 H [obv.].  
*Obv.:* As B. (Dressel p. 13: Same die as B. Bernardi p. 83; Savio p. 80: different dimensions, hence two dies).  
*Rev.:* Alexander with diadem on horse to right. In his right hand, a spear pointing at warrior wearing a Phrygian helmet lying on the ground, carrying a shield, right arm raised. On left, ΒΑCΙ-ΑΕVC; above, ΑΛΕΞΑΝΔΡΟC.
- I Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2425. 105.75 or 106 g, 57.50 mm [Savio; Dressel 14 n. 1]; 105 g, 57 mm [Bernardi]; 105.97 g, 58 mm [Peixoto Cabral]; 11 h.  
*References:* Svoronos pl. 10.2; Bernardi p. 83 no. 8; Savio p. 80 I [ex coll. Vinga, Alexandria]; Peixoto Cabral [ex coll. James Loeb]; Dressel p. 14 I.  
*Obv.:* As B, same die.  
*Rev.:* As B, same die (both Dressel p. 14 and Bernardi p. 83 “probalimente”).
- K Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2430. 70.50 g, 58 mm [Dressel; Bernardi; Savio]; 70.68 g, 57 mm [Peixoto Cabral]; 12 h.  
*References:* Svoronos pl. 11.2; Bernardi p. 83 no. 11 pl. 4.11; Savio p. 80 K [ex coll. Eddé, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel p. 14 K.  
*Obv.:* As C, same die (Dressel p. 14; Bernardi p. 83 “forse lo stesso conio”).

*Rev.*: Nereid riding on a sea-centaur to right, who carries a trident over his shoulder and holds in his left hand a fish. Amid the waves four dolphins.

*Prototype of Rev.*: Cameo in Florence (*LIMC* VIII no. 58, s. v. Tritones pl. 52); Bruneau and Vatin (1964), p. 263, fig. 6 (Triton and tritoness).

- L Aboukir. Baltimore. Walters Art Museum Inv. 59.1. 96.566 g, 12 h [Museum] 96.65 g, 53–55 mm [Dressel; Savio]; 96.65 g, 55 mm [Bernardi]; 95 g, 54 mm [Cat. *Search for Alexander*].

*References*: Svoronos pl. 11.3; Bernardi p. 83, no. 12, pl. 4.12; Savio p. 80 L [ex coll. Kyticas, Cairo]; Dressel p. 14 L, pl. 4.10 [rev.]; Cat. *Search for Alexander* pp. 103–104, no. 11, with ill. and pl. 5; Cat. *Alexander* p. 33, no. 12, with ill.; Arnold-Biucchi (2006), 32–33, with ill.

*Obv.*: As C and K, same die (Dressel p. 14).

*Rev.*: Alexander, cuirassed and bareheaded, wearing a chlamys and carrying a shield and spear in his left hand riding in a four-horse chariot. Chariot decorated with garlands and its center with unidentified group or figure (Achilles and Patroklos? See Vermeule [1982], 64). In Alexander's right hand, an Attic helmet. To his right, Nike to left crowning Alexander. On the right, a bearded warrior in armor with spear and round shield in his left hand and a palm branch in his right turned right. On the left, a female figure (her breast uncovered) with spear in her right hand and palm branch in her left. Both figures are looking inward. Of the four horses, each pair is looking outward. In exergue, ΑΛΕΙΑΝΔΡΟΒ; above, ΒΑCΙ-ΑΕΩC. For prototype, see Dressel pp. 14–15, n. 3 and pl. 4.9; Cat. *Alexander* p. 104 (Ares, Roma/Virtus).

- M Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2431. 77.25 g, 55 mm [Dressel; Savio]; 77 g, 55 mm [Bernardi]; 77.47 g, 52 mm [Peixoto Cabral]; 12 h.

*References*: Svoronos pl. 12.1; Bernardi p. 84, no. 13, pl. 5.13; Savio pp. 80–81 M [ex coll. Eddé, ex coll. J. Pierpont Morgan]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel pp. 15–16 M, pl. 3.3; *LIMC* II (1984), s. v. "Athena," pp. 1083–1084, no. 131, pl. 793.

*Obv.*: Cuirassed bust of Alexander with shield and Attic helmet (no cheek pieces) seen from the front to right. Head turned upward. On the breastplate, a representation of Alexander with spear in his right hand and sword (*parazonium*) sitting on heap of weapons to right. (Dressel p. 15, n. 2 compares with coinage of *koinon*). On left side, Nike crowning Alexander with palm branch and on the right another crowning female figure to right with wand/sword (?) in her left hand (Dressel p. 15, Arete?). On the helmet, a cavalry battle is represented. Compare Dressel p. 15, n. 1; illustrated by Fuhrmann (1931), 84–86, pl. 4a: Horseman on left in Greek armor, the one on the right in blouse, trousers, and wearing a tiara.

*Rev.*: Athena wearing a chiton with aegis standing to right, a spear is held diagonally down with her left hand. She is wearing an Attic helmet (again without cheek pieces). In her right hand she holds a Corinthian helmet, which is decorated with the figure of a horse (?) and possibly its rider, too (Dressel pp. 15–16, n. 3). On the ground, a coiled serpent to the right. Behind Athena, a profiled column, on its top, an owl to the right. On the column, an inscription in three lines: ΟΛΥΜΠΙΑ/ΔΟΚ. On the left side, an olive tree.

- N Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2432. 48 g, 48 mm [Dressel; Bernardi; Savio]; 47.89 g, 47 mm [Peixoto Cabral]; 12 h.

*References*: Svoronos pl. 12.2; Bernardi p. 84, no. 14, pl. 5.14; Savio p. 81 N [ex coll. Eddé, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel pp. 16–17 N, pl. 4. 12 [obv].

*Obv.*: As M, but variations in physiognomy and generally of smaller dimensions. On helmet, representation of Ganymede with eagle of Zeus to right. Alexander (Dressel p. 16; Bernardi p. 84), male (Savio p. 81). Helmet decorated with a serpent. Breastplate with scene as on Dressel M, but of poor conservation and struck less precisely.

*Rev.*: Nereid, to right, riding on a *ketos* to the left. With her left hand she holds a garment above herself and in her right an unidentified object, possibly a seashell.

- O Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2434. 49 g, 46 mm [Dressel; Bernardi; Savio]; 48.89 g, 46 mm [Peixoto Cabral]; 12 h.

*References*: Svoronos pl. 12.3; Bernardi pp. 84–85, no. 16, pl. 6.16; Savio p. 81 O [ex coll. Eddé, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel pp. 17–18 O.

*Obv.*: Female bust, draped and veiled to right. At outer right, a wand around which a serpent is coiled. Olympias (Bernardi p. 84), possibly Olympias (Dressel p. 17, n. 3), female (Savio p. 81).

*Rev.*: Athena wearing peplos, aegis, and Corinthian helmet sitting on throne to left. Her right hand holds bowl (*phiale*) offering food to a serpent, which is coiled in an olive tree left. Left hand of Athena on back of throne. On right, Β – ΑΛΙΑΕΩΚ; on left, ΑΛΕΞΑΝΔΡΟΥ.

- P Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2435. 48 g, 47 mm [Dressel; Bernardi; Savio]; 58.07 g, 46 mm [Peixoto Cabral]; 11 h.

*References*: Svoronos pl. 12.4; Bernardi p. 85, no. 17; Savio p. 81 P [ex. coll. Eddé, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel p. 18 P.

*Obv.*: As O, same die (Dressel p. 18; Bernardi p. 85, “forse”).

*Rev.*: Perseus with harpa leading Andromeda, who wears a coat, away from the rocks, where she had been held, down to the right. In front, the dead beast (*ketos*), on the right, Eros with his bow to the left.

.

- Q Aboukir. Thessalonika. Archaeological Museum Inv. MΘ 4304. c. 57 mm [Dressel; Savio]; 120.06 g, 59 mm [M & M; Bernardi]; 57 mm, 62 g, thickness 8 mm [Cat. Rome] 58 mm, 120.06 g, thickness 8 mm [Museum] die axis ?  
*References:* Svoronos pl. 13.2; Monnaies et Médailles, Basel Auction 25, 17 Nov. 1962, p. 40, no. 732, pl. 18 [ex Nahman, Cairo; ex Pierpont Morgan]; Bernardi p. 85, no. 18, pl. 6.18; Vermeule (1982, p. 62, with n. 10); Savio p. 82 Q; Kotaridou and de Vito, p. 204, no. 4, with ill.; Dressel p. 19 Q [1902 with Nahman, Cairo, present owner unknown].  
*Obv.:* Bust of a woman in three-quarter view to the right. She is wearing a diadem and has her head partly veiled. Her left hand is lifting the veil.  
 Olympias [Bernardi p. 85; Savio p. 82]. Most probably Olympias (Dressel p. 19, n. 1).  
*Rev.:* As D, same die (Dressel p. 19; Bernardi p. 85 "forse").
- R Aboukir. Baltimore. Walters Art Museum Inv. 59.2. 63.746 g, 11 h [Museum] 63.82 g, 54–54.5 mm [Dressel; Savio], 63 g, 54 mm [Bernardi], 62 g, 54 mm [Cat. *Search for Alexander*].  
*References:* Svoronos pl. 13.3; Bernardi p. 85, no. 19, pl. 6.19; *Cat. Search for Alexander* p. 103, no. 10, with ill. and pl. 5; Savio p. 82 R [ex coll. Kyticas, Cairo, now Baltimore]; Dressel p. 19 R; *Cat. Alexander* p. 34, no. 13, with ill.  
*Obv.:* As Q, same die.  
*Rev.:* As K, same dies (both Dressel p. 19; Bernardi p. 85 "forse").
- S Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2433. 69.50 g, 59 mm [Dressel; Bernardi; Savio]; 69.42 g, 57 mm [Peixoto Cabral]; 12 h.  
*References:* Svoronos pl. 14.2; Bernardi p. 85, no. 21, pl. 7.21 [uncertain whether *obv.* of Dressel S or R illustrated]; Savio p. 82 S [ex coll. Eddé, Alexandria]; Peixoto Cabral [ex coll. Pierpont Morgan]; Dressel pp. 19–20 S.  
*Obv.:* Nearly identical to E. According to Dressel p. 19 same die, Bernardi p. 86, n. 6 rightly points at differences in the angle the spear is held. Here it is in contrast to E nearly horizontal. Portrait with moustache. Relief worn, but representation of whiskers is possible.  
*Rev.:* As K, same die (Dressel p. 19; Bernardi p. 86 "forse").
- T Aboukir. Baltimore. Walters Art Museum Inv. 59.3. 71.671 g, 11 h [Museum] 71.75 g, 57 mm [Dressel; Savio]; 71 g, 57 mm [Bernardi]; 70 g, 57 mm [Cat. *Search for Alexander*].  
*References:* Svoronos pl. 14.1; Bernardi p. 85, no. 20, pl. 7.20; *Cat. Search for Alexander* p. 115, no. 33, with fig.; Savio p. 83 T [ex coll. Kyticas, Cairo]; Dressel p. 20 T; *Cat. Alexander* p. 35, no. 14, with fig.

*Obv.*: Cuirassed and laureate bust of Caracalla with *paludamentum*, round shield and spear seen from the back to left. Moustache and whiskers. Shield decorated with Nike in biga, left.

*Rev.*: Alexander, diademed, in short garment with spear to right defending himself against boar attacking from the left. Top left, a dog joining the scene. On left, BACIAEVC; above, AΛEΞANΔPOC.

U Aboukir. Lisbon. Museu Calouste Gulbenkian Inv. 2427. 47.5 or 47.75 g, 41 mm [Dressel; Savio]; 47.45 g, 41 mm [Bernardi]; 47.61 g, 40 mm [Peixoto Cabral]; 12 h.

*References*: Svoronos pl. 14.4; Bernardi p. 86, no. 23, pl. 7.23; Savio p. 83 U [ex coll. Vinga, Alexandria, now Lisbon]; Peixoto Cabral [ex coll. James Loeb]; Dressel p. 20 U.

*Obv.*: Laureate head of Apollo to left, in left field, a laurel branch.

*Rev.*: As E, same die (Dressel p. 20; Bernardi p. 86 "forse").

Athens. National Numismatic Museum. From Setta in Euboia in 1964. Mounted 32.1 g, without 21.7 g, without 33 mm [*Archaiologikon Deltion* 1964; Savio; Bernardi; Jenkins].

*References*: I. R. Christodulopoulos, *Archaiologikon Deltion* 19 (1964), 15 with fig.; Touratsoglou (2000, 79); G. Daux, *BCH* 88 (1964), 690; N. Kaltsas, ed., *Agon. Cat. Athens* (2004), 68–69, figs. 4–5; E. Glytsi in *Cat. Athens* (2004), 12, fig. 1 (*rev.*); Bernardi pp. 86, 89; Savio pp. 95–96 β; M. R. Jenkins, *AAA* 19 (1986), 114–118.

*Obv.*: Cuirassed bust of Alexander with coat in three-quarter view to the left. He wears a crested Attic helmet with small cheek pieces. Helmet decorated with representation of Pegasos (?) and the neck cover with a star. Center protection of helmet bears a small ornament (or horse/griffin?).

*Rev.*: Nike to right, writing BA/CIA/E(OC) on round shield placed on a cippus. First line of inscription is followed by an empty one before legend continues with letters CIA and last line with letter E. Thus the positioning of letters leaves no space for complete title. On right, AΛEΞAN (E square); on left, ΔPOY.

The condition of this medallion raises serious doubts about its authenticity: the surface is quite uneven and is characterized by tiny porous cavities uncommon in struck flans but familiar from casts. In addition, circular lines appear concentrically, in contrast to the ones on the pieces from Aboukir; there are no traces of hammering on the flan. In contrast to the iconography of the Alexander wearing a helmet known from the medallions from Aboukir and the coins of the Macedonian *koinon*, this piece shows his frontal locks heavily displaced despite the helmet, and the helmet itself is equipped with cheek pieces. Also, the whole area between cheek piece, neck cover, and transition to helmet around the temples is

represented rather uninspiringly, which leaves open the question of whether the “engraver” actually knew what it was he intended to depict. Bernardi (1970, 89) tells the rather colorful story of a former Turkish slave from Greece having been given this piece by her lover.

Cambridge, Fitzwilliam Museum. 21.41 g, 36 mm [AMNG; Savio]; 21.42 g, 12 h [SNG]. Bought in Serres, Greece, by W. M. Leake before 1815 [AMNG; Savio, SNG]; 21.44 g, 37 mm, 12 h.

*References:* AMNG III 1, no. 875, pl. 4.1; Toynbee (1944), no. 5, pl. 3.5; SNG GB IV 3, no. 2351, pl. 43; Savio p. 90 a; P. Moreno, *Cat. Rome* (1995), 177, fig. 4.23.1 [erroneously “Paris, from Tarsos,” relates motif with Lysippian prototype, compare base from Messene]; Vermeule (1982), p. 63, n. 11, p. 69.

*Obv.:* Head of Athena with Corinthian helmet to left. Helmet decorated with serpent (following the example of Alexander’s lifetime gold coinage).

*Rev.:* Horseman in armor wearing coat and boots to right fighting a lion with his spear. Pantherskin as saddlecloth. On left, A-ΛΕΞ (E round); above, AN-ΔΡΟC. In front of the horse’s neck, traces of another hoof and behind the animal, traces of a mane. Close to right leading hoof, three lines in relief. Above the A of the legend on top, another letter A lacking the horizontal bar.

This suggests at least two strikes on this flan. The traces left and their position hint at a representation of this reverse, which showed Alexander as victor on his rearing mount. Compare Dressel H in Lisbon, but of much smaller dimensions.

Coll. J. Spier. From Asia minor [Vermeule (1982), p. 71]. Rolled fragment (1/3–1/2) of size of “regular” Aboukir medallion.

*References:* Vermeule (1982), 71, pl. 8; 1986, 22–23, fig. 25.

*Obv.:* Bust of Athena Parthenos to right.

*Rev.:* Nike with palm branch in quadriga to right. ΑΛΕΙΑΝΔΡΟ[?].

#### Smaller Medallions Struck (unless stated otherwise) in Gold

- 1 London. British Museum. 1.88 g, 10 mm [AMNG]; 1.86 g, 11 mm, 3 h.

*References:* AMNG III 1, no. 881; BMC Macedonia p. 21, no. 93.

*Obv.:* Diademed head of Alexander (long hair) to right.

*Rev.:* Lion to left.

- 2 London. British Museum. 6.96 g, 21 mm [AMNG]; 6.89 g, 22 mm.

From Tarsos?

*References:* AMNG III 1, no. 882; Wroth, pp. 99–100, pl. 10, 6 [talismen or amulet, allegedly from Tarsos hoard]; Montagu Sale March 1897, lot 118.

*Obv.:* Diademed head of Alexander (long hair) to right.

No reverse image.

- 3 Berlin. Münzkabinett. Acc. 1900 Imhoof-Blumer. 0.8 g [AMNG]; 0.83 g, 15 mm.  
*References:* AMNG III 1, no. 883.  
*Obv.:* Diademed head of Alexander (long hair) to right.  
*No reverse image (flat).*  
*Metal analysis:* *Obv.* 84.7% AV, 13.7% AR, 1.6% CU; *Rev.* 84.3% AV, 13.1% AR, 2.6% CU (error margin 3 resp. 4% for AV and AR, CU on *obv.* 12%, *rev.* 10%).
- 4 Oxford. Ashmolean Museum. 2.36 g, 17 mm, 12 h [Hess-Leu]; 2.36 g, 12 h [SNG]; 2.36 g, 18 mm, 12 h [Ars Classica].  
*References:* Ars Classica, Auction 17, 3 Oct. 1934, Luzern, p. 22, no. 413, pl. 13 [similar to pieces from Aboukir and Tarsos]; Hess-Leu Luzern/Zürich, Auction 16 April 1957, no. 163, pl. 6 [from Aboukir hoard, Severan period]; Vermeule (1982), 63, n. 12; Savio p. 97 γ, pl. C 2 [Rev.]; SNG GB V 3, no. 3311, pl. 68.  
*Obv.:* Diademed head of Alexander (long hair) to right.  
*Rev.:* Cista mystica with coiled serpent. On left, ΟΛΥΜ; right, ΠΙΑΔΟC.
- 5 London. British Museum. 2.73 g, 17 mm [AMNG]; 2.74 g, 18 mm, 12 h.  
*References:* AMNG III 1, no. 877, pl. 4, 2; BMC Macedonia p. 21, no. 92 with drawing.  
*Obv.:* Diademed head of Alexander (with flying hair, but style unlike the type of the *koinon*) to left.  
*Rev.:* Lion to right. On top, ΑΛΕΙΑ (E round); in exergue, ΝΔΡΟΥ.
- 6 Present location unknown. 20 mm [AMNG].  
*References:* AMNG III 1, no. 876; Haverkamp, pl. 18, 9.  
*Obv.:* Cuirassed and diademed bust of Alexander with coat seen from the front to right.  
*Rev.:* Lion to right. On top, ΑΛΕΞΑΝ (E round); in exergue, ΔΡΟΥ.  
*References:* AMNG III 1, no. 876 compares with *koinon* coin, e.g., no. 808.
- 7 Whereabouts unknown. Coll. Six. 1.76 g, 13 mm [AMNG]; Pressed?  
*References:* AMNG III 1, no. 884; Guépin, pp. 315, 317, fig. 13.  
*Obv.:* Cuirassed and diademed bust of Alexander with coat seen from the back to the left. At his left shoulder, a shield; in his covered right hand, a spear.  
*No reverse image.*  
*References:* AMNG III 1, no. 884 compares with coins of the *koinon*, e.g., no. 405 = 406 = 407, 1.2. Inferior style uncommon with pieces above.
- 8 Whereabouts unknown, 1905 in trade. 2.38 g, 13 mm.  
*References:* AMNG III 1, no. 878.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right. On top, ΑΛΕΙΑΝ; in exergue, ΔΡΟΥ.

- 9 London, British Museum. 1.17 g, 9 mm [AMNG]; 9 h.  
*References:* AMNG III 1, no. 879, pl. 4, 10; BMC Macedonia p. 21, no. 94 with drawing.  
*Obv.:* Bust of youthful Herakles (rather than Severus Alexander, even less probable Elagabalus?) seen from the front to right. He is laureate and wears a lion's skin around his neck.  
*Rev.:* Lion to right. On top, ΑΛΕΙΑ[N]; in exergue, ΔΡΟΥ.
- 10 London. British Museum Inv. 1880.6.1.8. 1.49 g, 11 mm, 12 h.  
 Bought from S. Sava coll. together with twenty-seven coins mostly from the Troad.  
*References:* BMC Troad p. 12, no. 37 (time of Caracalla); Vermeule (1982), 65, n. 15.  
*Obv.:* Head of Herakles with lion's skin right.  
*Rev.:* Grazing horse to right; faded inscription below reads, ΑΛΕΙΑΝΔΡΟΥ.
- 11 Berlin. Münzkabinett. Acc. 1910/648. 5.31 g, 25 mm with loop, 22 mm without loop, 12 h.  
 From Prince Michael Obolensky coll. Allegedly found in Russia.  
*References:* De Koehne (1957), 174, pl. 12.1.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* She-wolf suckling twins. Α-ΛΕΞΑΝΔΡΟΥ (retrograde, E round), above two busts (left male radiate, right one worn: Sol and Luna [?], less likely emperor and empress).  
 Already with loop when acquired by Berlin, but not as recorded in 1857.
- 12 Veria. Museum (?). Grave find (grave A) of third century AD in ancient Beroia, Makedonia. 22 mm.  
*References:* Touratsoglou, *ADelt* 24 (1969), 313–315, pl. 328 b; Touratsoglou (2000, 79). Pressed?  
*Obv.:* Head of Alexander with ram's horn to left.  
*Rev.:* *Cista mystica* with coiled serpent.  
 Inferior style, sheet metal.
- 13 Berlin. Münzkabinett Acc. 1875/98. 1.15 g, 10 mm, 12 h.  
 "From Makedonia" (Sallet 1876).  
*References:* AMNG III 1, no. 880 [not authentic]; Dressel p. 32, with n. 2 [authentic]; Gaebler, p. 13 [no remark]; von Sallet, pp. 56–57 with drawing [authentic, from Makedonia].  
*Obv.:* Diademed (?) and veiled head of Olympias to right.  
*Rev.:* Coiled serpent to left. On top, ΟΛΥΜ; below, ΠΙΔ[OC].  
 Holed (*obv.* 12 h).



*Metal analysis:* 98.6% AV, 1% AR, 0.4% CU (error margin 3 resp. 25 resp. 40%). Uncommonly high fineness, but see also Gaebler in *AMNG* III, no. 880.

14 Whereabouts unknown. 1.62 g.

AV sheet with bust of "Olympias," veiled, to left, from "Byzantine" (actually second to third century AD) grave at the Academy of Plato at Athens.

*References:* E. Varoucha-Christoudouloupoulou, *ADelt* 19 (1964), 15, pl. 4.66; Daux, p. 690, fig. 14; F. Stauropoulos, *Praktika* (1963), p. 22, pl. 20 a; Alföldi (1990), 85–86, pl. 245.8.

Smaller Medallions (Struck) in Silver

15 Frankfurt am Main? 2.18 g, 16 mm.

*References:* *AMNG* III 1, no. 885.

*Obv.:* Diademed head of Alexander (floating hair) to right.

*Rev.:* Athena sitting left, holding Nike in her right hand, on right side a spear with point downward, and a shield next to her throne. On left, ΑΛ-ΕΞΑΝΔ (E round); in exergue, -POV.

Damaged.

*References:* *AMNG* III 1, no. 885 suggests coins of Lysimachos with Athena Nikephoros as prototype for reverse. Recent inquiries show that this piece is not in the museum there.

16 Gotha. 1.13 g, 12 mm.

*References:* *AMNG* III 1, no. 886, pl. 4.5.

*Obv.:* Diademed head of Alexander (floating hair) to right.

*Rev.:* Winged Eros riding a lion to right, his right hand raised. In exergue, ΑΛΕΞΑΝΔΡΟΥ (last two letters in ligature).

Damaged.

17 Oxford. Ashmolean Museum. 1.35 g, 13 mm [*AMNG*]; 1.35 g, 6 h [*SNG*]; 1.35 g, 12 mm, 6 h.

*References:* *AMNG* III 1, no. 887, pl. 4.3; *SNG* GB V 3, no. 3312, pl. 68.

*Obv.:* Diademed head of Alexander (long hair) with ram's horn to left.

*Rev.:* Lion to right. On top, ΑΛΕΞΑΝ; in exergue, ΔΡΟV.

18 Paris. Cabinet des Médailles Inv. FG 1119. 1.08 g, 12 mm, 12 h.

*References:* *AMNG* III 1, no. 888.

*Obv.:* Diademed head of Alexander (long hair) with ram's horn to left.

*Rev.:* Lion to right. On top, ΑΛΕΞΑ; in exergue, ΝΔΡΟ[V].

Damaged.

19 Paris. Cabinet des Médailles Inv. FG 1118. 1.19 g, 12 mm, 12 h.

*References:* *AMNG* III 1, no. 889, pl. 4.4.

*Obv.*: Diademed head of Alexander (long hair) with ram's horn to right.

*Rev.*: Lion to right. On top, ΑΛΕΙΑΝ (E round); in exergue, ΔPOV.

- 20 Copenhagen. National Museum. 0.9 g, 12 mm [AMNG]; 0.9 g, 12 mm, 12 h [SNG].

*References*: AMNG III 1, no. 890; SNG Copenhagen no. 1381, pl. 36.

*Obv.*: Diademed head of Alexander (long hair) with ram's horn to right.

*Rev.*: Lion to right; in exergue, ΑΛΕΞΑΝΔΡΟ[V].

Damaged.

- 21 London. British Museum Inv. 1910.11-4.73 Ready. 1.60 g, 12 mm, 4 h.

*Obv.*: Diademed head of Alexander (long hair) with ram's horn to right.

*Rev.*: Bowcase, below bow; in center, ΑΛΕΞΑΝΔΡΟV.

- 22 London. British Museum. 1.05 g, 12 mm [AMNG]; 1.04 g, 11 mm, 2 h.

*References*: AMNG III 1, no. 891; BMC Macedonia p. 22, no. 97.

*Obv.*: Diademed head of Alexander (long hair) to right.

*Rev.*: Lion to right. On top, ΑΛΕ (E round); in exergue, ΞΑΝΔΡΟV.

- 23 Berlin. Münzkabinett. Acc. 1900 Imhoof-Blumer. 0.88 g, 12 mm [AMNG]; 0.87 g, 12 mm, 1 h.

*References*: AMNG III 1, no. 892.

*Obv.*: Diademed head of Alexander (long hair) to right.

*Rev.*: Lion to right. On top, ΑΛΕΙ[Α]; in exergue, ΝΔ[POV].

Damaged, "inferior style" (AMNG).

- 24 Berlin. Münzkabinett. Acc. 1900 Imhoof-Blumer. 1.05 g, 11 mm [AMNG]; 6 h.

*References*: AMNG III 1, no. 893.

*Obv.*: Diademed head of Alexander (long hair) to right.

*Rev.*: Lion to right. On top, ΑΛΕΞ[ΑΝ]; in exergue, ΔPOV.

Damaged.

- 25 Gotha. 0.76 g, 10 mm.

*References*: AMNG III 1, no. 894.

*Obv.*: Diademed head of Alexander (long hair) to right.

*Rev.*: Lion to right. On top, ΑΛΕΞΑΝ; in exergue, ΔΡ[OV].

Damaged.

- 26 Paris. Cabinet des Médailles Inv. FG 1117. 1.22 g, 12 mm, 1 h.

*References*: AMNG III 1, no. 899 pl. 4.6.

*Obv.*: Diademed head of Alexander (long hair) to right.

*Rev.*: Lion to right.

Damaged.

- 27 Glasgow. Hunter Coin Cabinet. 0.59 g, 11 mm [AMNG]; 0.59 g, 11 mm, 9 h [SNG].  
*References:* AMNG III 1, no. 900.1, pl. 4.7; McDonald, p. 357, no. 3, pl. 24.16; SNG GB XII 1, no. 755.  
*Obv.:* Diademed head of Alexander (long hair) to right.  
*Rev.:* Lion to right.  
 For a forgery, see McDonald, I 3, p. 57, no. 2, pl. 24.15; SNG GB XII 1, no. 756.
- 28 St. Petersburg. 0.65 g, 11 mm.  
*References:* AMNG III 1, no. 900, 2.  
*Obv.:* Diademed head of Alexander (long hair) to right.  
*Rev.:* Lion to right.
- 29 London. British Museum. 0.95 g, 13 mm [AMNG]; 0.94 g, 14 mm, 12 h.  
*References:* AMNG III 1, no. 902; BMC Macedonia p. 22 no. 96.  
*Obv.:* Diademed head of Alexander (long hair) to right.  
*Rev.:* Lion to left.
- 30 London. British Museum. 1.7 g, 13 mm [AMNG]; 1.68 g, 13 mm, 12 h.  
*References:* AMNG III 1, no. 895; BMC Macedonia p. 21, no. 95.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right. On top, ΑΛΕΞΑ; in exergue, ΝΑΡΟΥ.
- 31 Paris. Cabinet des Médailles Inv. FG 1116. 0.62 g, 12 mm [AMNG]; 10 mm, 12 h.  
*References:* AMNG III 1, no. 896.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right. On top, [ΑΛ]ΕΞΑΝ; in exergue, ΔΡΟΥ.  
 Damaged.
- 32 Berlin. Münzkabinett. Acc. 1900 Imhoof-Blumer. 0.9 g, 11 mm [AMNG]; 12 h.  
*References:* AMNG III 1, no. 897, pl. 4.9.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right. In exergue, ΑΛΕΞΑΝΔΡ.
- 33 Berlin. Münzkabinett. Acc. 1875 Prokesch-Osten. 0.78 g, 11 mm [AMNG]; 12 h.  
*References:* AMNG III 1, no. 901.1.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right.
- 34 Berlin. Acc. 1875/10. 0.62 g, 11 mm [AMNG]; 9 h.  
 Purchased from Mr. Lambros.  
*References:* AMNG III 1, no. 901.2, pl. 4.8.  
*Obv.:* Head of Herakles with lion's skin to right.  
*Rev.:* Lion to right.

- 35 Paris. Cabinet des Médailles Inv. H.S. R 4360. 1.77 g, 15 mm, 12 h.  
*Obv.*: Head of Herakles with lion's skin to right.  
*Rev.*: Lion to right.  
 Damaged.
- 36 London. British Museum Inv. 1922.10-20.60 Spink (ex H. Weber). 0.73 g, 10 mm, 6 h.  
*Obv.*: Head of Herakles with lion's skin to right.  
*Rev.*: Lion to right. On top, AΛE (E round); below, IANΔPO[V].
- 37 Paris. Cabinet des Médailles Inv. FG 1053. 0.96 g, 10 mm, 1 h.  
*References*: AMNG III 1, no. 898.  
*Obv.*: Head of Herakles with lion's skin to right.  
*Rev.*: Bow, below club, at top thunderbolt. On top, AΛEΞAN; below, ΔPOV.  
 In contrast to Alexander's own coinage, the reverse lacks a bowcase. Compare Price (1991), nos. 3590–3591, 3886–3887, 4012–4016 (all half-obols of differing mean weight c. 0.3 g). See also forgeries, nos. F 109–110, pl. 156.
- 38 Paris. Cabinet des Médailles Inv. FG 113. 2.25 g, 10 mm, 9 h.  
*References*: BMC p. 12; Imhoof-Blumer, p. 465, no. 36 [2.92 g, 10 mm]; Ch. Lenormant, *RevNum* (1856), 41–44, pl. 1.10 = Mionett II, 639, no. 64.  
*Obv.*: Laureate head of Alexander (?) / Apollo to right.  
*Rev.*: Grazing horse to right. [A]ΛEIA/[NΔPOV] (E round).  
 Another piece mentioned by Imhoof-Blumer (465, post no. 36), allegedly in Munich in 1883, cannot be located at the present time.

### LIST OF FIGURES

- Fig. 1. Medallion Philip I, Grueber BM  
 Fig. 2. AMNG 778.1 helmet  
 Fig. 3. AMNG 813.1 bust  
 Fig. 4. AMNG 816.1 bust/lion  
 Fig. 5. Alexander as Herakles/quadriga Contorniate  
 Fig. 6. Olympias/Alexander Contorniate  
 Fig. 7. Olympias/Alexander Contorniate, second specimen  
 Fig. 8. Caracalla/Olympias Contorniate  
 Fig. 9. AMNG 367.2 Olympias on kline

### PHOTO CREDITS

Dressel A–E, fig. 5–8: © Staatliche Museen zu Berlin Stiftung Preussischer Kulturbesitz, Münzkabinett. Aufnahmen durch Lutz-Jürgen Lübke.

Dressel M (cast), cat. 3, 11, 13, 23–24, 32–34: © Staatliche Museen zu Berlin  
Stiftung Preussischer Kulturbesitz, Münzkabinett. Aufnahmen durch Reinhard  
Sazcewski.

Dressel L, R, T: © The Walters Art Museum, Baltimore.

Dressel Q: © Archaeological Museum, Thessaloniki.

Eubolia: © National Numismatic Museum, Athens.

cat. 18, 19, 31, 37, 38: © Cabinet des Médailles, Paris.

cat. 27: © Hunter Coin Cabinet, Hunterian Museum and Art Gallery, Glasgow.

All remaining photos: © the author

### KEY TO PLATES 100–110

Tarsos I. Paris. Cabinet des Médailles.

Tarsos II. Paris. Cabinet des Médailles.

Tarsos III. Paris. Cabinet des Médailles.

Dressel A. Berlin. Münzkabinett.

Dressel B. Berlin. Münzkabinett.

Dressel C. Berlin. Münzkabinett.

Dressel D. Berlin. Münzkabinett.

Dressel E. Berlin. Münzkabinett.

Dressel F. Lisbon. Museu Calouste Gulbenkian.

Dressel G. Lisbon. Museu Calouste Gulbenkian.

Dressel H. Lisbon. Museu Calouste Gulbenkian.

Dressel I. Lisbon. Museu Calouste Gulbenkian.

Dressel K. Lisbon. Museu Calouste Gulbenkian.

Dressel L. Baltimore. The Walters Art Museum.

Dressel M. Lisbon. Museu Calouste Gulbenkian.

Dressel M. Cast in Berlin with detail of battle scene on helmet.

Dressel N. Lisbon. Museu Calouste Gulbenkian.

Dressel O. Lisbon. Museu Calouste Gulbenkian.

Dressel P. Lisbon. Museu Calouste Gulbenkian.

Dressel Q. Thessaloniki. Archaeological Museum.

Dressel R. Baltimore. The Walters Art Museum.

Dressel S. Lisbon. Museu Calouste Gulbenkian.

Dressel T. Baltimore. The Walters Art Museum.

Dressel U. Lisbon. Museu Calouste Gulbenkian.

“Eubolia Niketerion.” Athens. National Numismatic Museum.

Cambridge Medallion. Fitzwilliam Museum.

Cat. 1. AMNG no. 881. London. British Museum.

Cat. 2. AMNG no. 882. London. British Museum.

Cat. 3. AMNG no. 883. Berlin. Münzkabinett.

Cat. 4. Oxford. Ashmolean Museum, Heberden Coin Room.

- Cat. 5. AMNG no. 877. London. British Museum.  
 Cat. 9. AMNG no. 879. London. British Museum.  
 Cat. 11. Berlin. Münzkabinett Acc. 1910/648.  
 Cat. 13. AMNG no. 880. Berlin. Münzkabinett.  
 Cat. 17. AMNG no. 887. Oxford. Ashmolean Museum, Heberden Coin Room.  
 Cat. 19. AMNG no. 888. Paris. Cabinet des Médailles.  
 Cat. 21. London. British Museum Inv. 1910.11-4.73.  
 Cat. 22. AMNG no. 891. London. British Museum.  
 Cat. 23. AMNG no. 892. Berlin. Münzkabinett.  
 Cat. 24. AMNG no. 893. Berlin. Münzkabinett.  
 Cat. 26. AMNG no. 899. Paris. Cabinet des Médailles.  
 Cat. 27. AMNG no. 900.1. Glasgow. Hunter Coin Cabinet.  
 Cat. 29. AMNG no. 902. London. British Museum.  
 Cat. 30. AMNG no. 895. London. British Museum.  
 Cat. 31. AMNG no. 896. Paris. Cabinet des Médailles.  
 Cat. 32. AMNG no. 897. Berlin. Münzkabinett.  
 Cat. 33. AMNG no. 901.1. Berlin. Münzkabinett.  
 Cat. 34. AMNG no. 901.2. Berlin. Münzkabinett.  
 Cat. 35. Paris. Cabinet des Médailles Inv. H.S. R 4360.  
 Cat. 36. London. British Museum Inv. 1922.10-20.60.  
 Cat. 37. AMNG no. 898. Paris. Cabinet des Médailles.  
 Cat. 38. Paris. Cabinet des Médailles Inv. FG 113.

## REFERENCES

- Alföldi, A., and E. Alföldi. 1976/1990. *Die Kontorniat-Medaillons*. 2 vols. Berlin.  
 AMNG III 1/2 = Gaebler, H. 1906/1935. *Die antiken Münzen Nord-Griechenlands. Die antiken Münzen von Makedonia und Paionia III*. 2 parts. Berlin.  
 Arnold-Biucchi, C. 2006. *Alexander's coins and Alexander's image*. Cambridge, Mass.  
 Arvanitakis, G. L. 1903. HO ΘΕΣΑΥΡΟΣ ΤΟΥ ΑΒΟΥΚΙΡ. *Hellenion*: 247–268.  
 Babelon, E. 1901. *Traité des monnaies grecques et romaines I*<sup>1</sup>. Paris.  
 Bastien, P. 1993. *Le buste monétaire des empereurs romains II*. Wetteren.  
 Bergemann, J. 1990. *Römische Reiterstatuen*. Mainz.  
 Bernardi, C. 1970. I Niketeria. *Rivista Italiana di Numismatica e Scienze Affini* 18: 79–90.  
 Bland, R. 1996. Gold and silver denominations AD 193–253. In *Coin finds and coin use in the Roman world*, C. E. King and D. G. Wigg, eds. Studien zu den Fundmünzen der Antike (SFMA) 10: 63–100. Berlin.  
 Boehringer, C. 1972. Zur Chronologie mittelhellenistischer Münzserien 220–160 v. Chr. *Antike Münzen und Geschnittene Steine* 5. Berlin.  
 ———. 1999. Beobachtungen und Überlegungen zu den Ären der pamphyliischen

- Alexandreier. In *Travaux de numismatique grecque offerts à Georges Le Rider*, Amandry and S. Hurter, eds., 65–75. London.
- Brendel, O. 1936. Der Schild des Achilles. *Die Antike* 12: 272–288.
- Bruneau, P., and C. Vatin. 1964. Une nouvelle mosaïque à Délos. *Bulletin de Correspondance Hellenique* 88: 252–266.
- Buhmann, H. 1975. *Der Sieg in Olympia und in den anderen panhellenischen Heiligtümern*. München.
- Burell, B. 2004. *Neokoroi: Greek cities and Roman emperors*. Leiden and Boston.
- Cat. Search for Alexander = 1980. *The search for Alexander. An exhibition*. Washington, Chicago, Boston, and San Francisco.
- Cat. Alexander = Pandermalis, D. 2004. *Alexander the Great. Treasures from an epic era of Hellenism*. New York.
- Crawford, H. M. 1974. *Roman Republican Coinage*. Cambridge.
- Dahmen, K. 2007. *The legend of Alexander the Great on Greek and Roman coins*. London and New York.
- Daux, G. 1964. Chronique des Fouilles 1963. *Bulletin de Correspondance Hellenique* 88: 682–693.
- de Koehne, B. 1857. Statère d'or d'Alexandre Sévère. *Revue Belge de Numismatique et de Sigillographie*: 174.
- Dressel, H. 1906. *Fünf Goldmedaillons aus dem Funde von Abukir. Abhandlungen der Königlich Preussischen Akademie der Wissenschaften*. Berlin.
- . 1909. Errata-corrige. *Zeitschrift für Numismatik* 27: 137–157.
- Eddé, J. 1905. Les trouvailles de trésors monétaires en Egypte. *Bollettino di Numismatica* III.11: 128–129.
- Espinosa, U. 1990. La alejandrofilia de Caracalla en la Antigua historiografía. In *Neronia IV*, J. M. Croisille, ed., pp. 37–51. Brussels.
- Fejfer, J. 1992. Divus Caracalla und Diva Julia Domna: a Note. In *Ancient portraiture: Image and message*, T. Fischer-Hansen et al., eds., pp. 207–219. Copenhagen.
- Fischer-Hansen, T., et al., eds. 1992. *Ancient portraiture: Image and message*. Acta Hyperborea 4. Copenhagen.
- Fittschen, K., and P. Zanker. 1994. *Katalog der römischen Porträts in den Capitolinischen Museen und den anderen kommunalen Sammlungen der Stadt Rom I<sup>2</sup>*. Mainz.
- Fuhrmann, H. 1931. *Philoxenos von Eretria*. Göttingen.
- Gaebler, H. 1906. Zur Münzkunde Makedoniens V. *Zeitschrift für Numismatik* 25: 1–38.
- Gagé, J. 1975. Alexandre le Grand en Macedoine dans le I<sup>er</sup> et II<sup>e</sup> moitié du III<sup>e</sup> siècle av. J.-C. *Historia* 24: 1–16.
- Gmyrek, C. 1998. *Römische Kaiser und griechische Göttin*. Milan.

- Gnecchi, F. 1912. *I Medaglioni Romani*. Milan.
- Guépin, J. P. 1976. Alexander Promachus. In *Festschrift A. N. Zadoks-Joepphus Jitta*, pp. 313–319. Groningen.
- Gundel, H. G. 1992. *Zodiakos. Tierkreisbilder im Altertum*. Mainz.
- Hardie, P. R. 1985. Imago mundi: cosmological and ideological aspects of the Shield of Achilles. *Journal of Hellenic Studies* 105: 11–31.
- Harl, K. W. 1987. *Civic coins and civic politics in the Roman East, AD 180–275*. Berkeley, Calif.
- Haverkamp, S. 1736. *Algemeene Historie der zaaken in Asie, Afrika en Europe I*. The Hague.
- Head, B. V. 1911. *Historia Numorum. A Manual of Greek Numismatics*. Oxford.
- Hill, G. F. 1922. Ancient methods of coining. *Numismatic Chronicle* 22: 1–42.
- Imhoof-Blumer, F. 1883. *Monnaies grecques*. Paris.
- Kaiser, W. B. 1986. Alexanders Goldmünzen. *Schweizerische Numismatische Rundschau (Revue Suisse de Numismatique)* 65: 41–57.
- Kallithrakas-Kontas, N., and A. A. Katsanos. 1998. PIXE analysis of ancient coins. In *Metallurgy in Numismatics IV*, A. Oddy and M. Cowell, eds., pp. 461–472. London.
- Klose, D. O. A., and G. Stumpf. 1996. *Sport Spiele Sieg. Catalogue*. Munich.
- Koch, G., and H. Sichtermann. 1982. *Römische Sarkophage*. Munich.
- Kottaridou, A., and A. de Vito. 1995. *Alessandro Magno. Storia e mito. Cat.* Rome.
- Kraay, C. M., and M. Hirmer. 1966. *Greek Coins*. London.
- Kroll, J. H. 1993. *The Greek coins*. The Athenian Agora 26. Princeton.
- Kyrieleis, H. 1971. Der Kameo Gonzaga. *Bonner Jahrbücher* 171: 162–193.
- . 1975. *Bildnisse der Ptolemäer*. Berlin.
- Leschhorn, W. 1998. Griechische Agone in Makedonien und Thrakien. In *Stephanos numismatikos. Festschrift E. Schönert-Geiss, U. Peter, ed.*, pp. 398–415. Berlin.
- Leschhorn, W., and P. R. Franke. 2002. *Lexikon der Aufschriften auf griechischen Münzen / Lexicon of Greek coin inscriptions*. Vienna.
- Liddell, H. G., and R. Scott. 1996. *A Greek-English lexicon*. Oxford.
- de Longpérier, A. 1868. Trésor de Tarse. *Revue Numismatique* 13: 309–336.
- L'Orange, H. P. 1953. *Studies of the iconography of cosmic rulership in the ancient world*. Oslo and Cambridge, Mass.
- Mastino, A. 1981. *Le titolatura di Caracalla e Geta attraverso le iscrizioni*. Bologna.
- McDonald, G. 1899–1903. *Catalogue of Greek coins in the Hunterian Collection I*. Glasgow.
- Megow, W.-R. 1987. *Kameen von Augustus bis Alexander Severus*. Antike Munzen und Geschnittene Steine 11.
- Mittag, P. F. 1999. *Alte Köpfe in neuen Händen*. Bonn.



- Mørkholm, O. 1991. *Early Hellenistic coinage from the accession of Alexander to the Peace of Apameia (336–186 BC)*. Cambridge.
- Moretti, L. 1953. *Iscrizioni agonistiche Greche*. Rome.
- Morrisson, C., et al. 1985. *L'or monnaie 2. Cahiers Ernest-Babelon*. Paris.
- Mowat, R. 1903. Les Médaillons Grecs du Trésor de Tarse et les monnaies de bronze de la Communauté Macédonienne. *Revue Numismatique* 13: 1–30.
- Müller, F. G. J. M. 1994. *The wall paintings from the oecus of the villa of Publius Fannius Synistor in Boscoreale*. Amsterdam.
- Münzer, F., and M. L. Strack. 1912. Die antiken Münzen von Thrakien. *AMNG* II 1. Berlin.
- Nigdelis, P. M. 1995. Oberpriester und Gymnasiarchen im Provinziallandtag Makedoniens: Eine neue Ehreninschrift aus Beroia. *Klio* 77: 170–183.
- Noe, S. P. 1937. *A bibliography of Greek coin hoards*. Numismatic Notes and Monographs 78. New York.
- Papiscia, M. 1999. Immagini «della imitatio Alexandri» in età severiana. I medaglioni di Tarso. In *Ancient Macedonia VI* 2, pp. 859–871.
- Peixoto Cabral, J. M., L. C. Alves, and M. Castro Hipólito. 2000. Análise não-destrutiva dos medalhões de Abuquir pertencentes à Coleção Calouste Gulbenkian. In *Homenagem a Mário Gomes Marques*, M. Castro Hipólito and D. M. Metcalf et al., eds., 401–417. Sintra.
- Pekáry, T. 1985. *Das römische Kaiserbildnis, Staat, Kult und Gesellschaft*. Das Römische Herrscherbild III 5. Berlin.
- Petzl, G., and E. Schwertheim. 2006. *Hadrian und die dionysischen Künstler. Drei in Alexandria Troas neugefundene Briefe des Kaisers an die Künstler-Vereinigung*. Asia minor Studien 58, pp. 95–96. Bonn.
- Pick, B. 1898. Die antiken Münzen von Dacien und Moesien. *AMNG* I. Berlin.
- Pleket, H. W. 1975. Games, prizes, athletes, and ideology: Some aspects of the history of sport in the Greco-Roman world. *Stadion* 1: 49–89.
- Price, M. J. 1981. A portrait of Alexander the Great from Egypt. *The Norwegian Numismatic Journal* 10: 32–37.
- . 1981b. Painting as a source of inspiration for ancient die engravers. In *Coins, culture, and history in the ancient world. Numismatic and other studies in honor of Bluma L. Trell*, M. J. Price and L. Casson, eds., pp. 69–75. Detroit.
- . 1991. *The coinage in the name of Alexander the Great and Philip Arrhidaeus*. Zurich and London.
- Rosenbaum-Alföldi, M. 1963. *Die constantinische Goldprägung*. Mainz.
- Rubensohn, O. 1902. Griechisch-Römische Funde in Ägypten. *Jahrbuch des Deutschen Archäologischen Instituts* 17: 46.

- Rudzicka, L. 1915. Die Münzen von Serdica. *Numismatische Zeitschrift* 48: 1–82.
- . 1932–1933. Die Münzen von Pautalia. *Bulletin de l'Institut archéologique bulgare* 7: 1–216.
- Sachs, A. J., and H. Hunger. 1998. *Astronomical diaries and related texts from Babylonia*. Vienna.
- Salzmann, D. 1982. *Antike Kieselsteinmoosiken*. Berlin.
- . 1983. Die Bildnisse des Macrinus. *Jahrbuch des Deutschen Archäologischen Instituts* 98: 351–381.
- . 2001. Alexanderschilde—Numismatische Zeugnisse für die Alexanderverehrung Caracallas. In *Wissenschaft mit Enthusiasmus. Festschrift K. Fittschen*, J. Bergemann, ed., pp. 173–191. Rahden.
- Savio, A. 1994–1995. Intorno ai medaglioni talismanici di Tarso e di Aboukir. *Rivista Italiana di Numismatica e scienze affini* 96: 73–103.
- Schmidt-Dick, F. 2002. *Typenatlas der römischen Reichsprägung von Augustus bis Aemilianus*. Vienna.
- Schulten, P. N. 1979. *Die Typologie der römischen Konsekrationsprägungen*. Frankfurt.
- Smith, R. R. R. 1988. *Hellenistic royal portraits*. Oxford.
- Stewart, A. 1993. *Faces of power: Alexander's image and Hellenistic politics*. Berkeley and Los Angeles.
- Svoronos, J. N. 1907. ΤΑ ΝΟΜΙΣΜΑΤΑ ΤΟΥ ΑΒΟΥΚΙΡ. *Journal International d'Archéologie Numismatique* 10: 369–371.
- . 1923–1926. *Les monnaies d'Athènes*. Munich.
- Leander Touati, M. 1987. *The great Trajanic frieze*. Stockholm.
- Touratsoglou, I. P. 1970. Δύο νέαι επιγραφικὴ μαρτυρίαι περὶ τοῦ Κοινοῦ Μακεδόνων κατὰ τὸν τρίτον μεταχριστιανικὸν αἰῶνα. *Ancient Macedonia* 1: 280–290.
- . 1988. Die Münzstätte von Thessaloniki in der römischen Kaiserzeit. *Antike Munzen und Geschnittene Steine* 12. Berlin.
- . 2000. *The Alexander of the coins*. Leukosia.
- . 2008. Tarsos, Aboukir, etc.; before and after. Once again. *American Journal of Numismatics* 20: 479–492.
- Toynbee, J. M. C. 1944. Greek imperial medallions. *Journal of Roman Studies* 34: 65–73.
- Velenis, G. 1999. Επιγραφές από την Αρχαία Αγορά της Θεσσαλονίκης. *Ancient Macedonia* 6: 1317–1327.
- Vermeule, C. C. 1982. Alexander the Great, the emperor Severus Alexander, and the Aboukir medallions. *Swiss Numismatic Review* 61: 61–72.
- . 1986. *Alexander the Great conquers Rome*. Cambridge, Mass.

- Voetter, O. 1903. *Sammlung Bachhofen von Echt*. Vienna.
- von Fritze, H. 1910. *Die Münzen von Pergamon*. Berlin.
- von Sallet, A. 1876. Olympias, Alexanders des Grossen Mutter. *Zeitschrift für Numismatik* 3: 56–57.
- Waddington, W. H., E. Babelon, and Th. Reinach. 1904. *Recueil général des monnaies grecques d'Asie Mineure*. Paris.
- Weiß, C. 2007. *Die antiken Gemmen der Sammlung Heinrich Dressel in der Antikensammlung Berlin*. Würzburg.
- Westermarck, U. 1961. *Das Bildnis des Philetairos von Pergamon. Corpus der Münzprägung*. Uppsala.
- Wörle, M. 1988. *Stadt und Fest im kaiserzeitlichen Kleinasien*. Vestiga 39. Munich.
- Wroth, W. 1898. Greek coins acquired by the British Museum. *Numismatic Chronicle* 18: 97–123.
- Ziegler, R. 1993. *Kaiser, Heer und städtisches Geld*. Vienna.

## Hoard Notes: A Hoard of Dacian Imitations from Sarmizegetusa Regia

PLATE III

PHILLIP DAVIS\*

The impressive remains of the Dacian fortress of Sarmizegetusa Regia are located in Hunedoara County, some 70 km north-east of the Roman town Ulpia Traiana Sarmizegetusa, in the mountains south of the modern town of Orăștie in south-western Transylvania (Glodariu et. al., 1992: 57–60).<sup>1</sup> Although the ancient “capital” of the Dacians has been extensively excavated, very few coins are known to have been found there or in the vicinity. The list is short: in 1847, a hoard of 514 Roman *denarii* was found at the hamlet of Grădiște, on the site of the Roman town. This consisted of 148 Republican coins, 15 of Julius Caesar, 2 of Mark Antony, 1 of Lepidus, 10 of Augustus, 3 of Agrippa, 3 of Tiberius, 2 of Agrippina, 4 of Germanicus, 16 of Caligula, 4 of Claudius, 69 of Titus, 109 of Domitian, 15 of Nerva, concluding with 2 coins of Trajan (Depeyrot and Moisil 2003: 201).<sup>2</sup> 111 coins were described as “uncertain;” one may surmise that many of them were in fact *denarii* of Vespasian. Further details of this hoard were not recorded.

More recently, and of much greater significance, Glodariu et. al. (1992: 60–61) report the 1988 excavation at Sarmizegetusa Regia itself of the remains of a pre-Roman coining workshop, including four dies. One could not be identified; the others are obverse dies of two Republican *denarii*, *RRC* 266/1 and *RRC* 407/2

\*Phida50@Comcast.net

1. Recent investigations indicate that the above-ground remains are primarily Roman, and the previous Dacian wall encompassed a smaller area at the top of the hill.

2. The total number of coins is given as 513, apparently an error.

(Crawford 1974), and an obverse die for an aureus or denarius of Tiberius. This discovery seems to indicate that the phenomenon of Dacian imitation of Republican coin types continued at least into early Imperial times (Davis 2006).

No other coins or other numismatic material dating prior to Trajan's siege of Sarmizegetusa Regia in AD 101–102 are known to have been found there, so the small hoard presented here is a welcome addition. This consists of six imitations of Republican *denarii*. The present owner acquired these coins in January, 2003, from a reliable trade source who reported conclusively that it was a hoard rather than an accumulation of single finds, and had been found intact at Sarmizegetusa Regia. Details of the container the hoard was found in, if there was one, are not available. In the following description, I have suggested the Republican prototype for the imitation only when that is reasonably certain. The prototype of several of these pieces cannot be identified, although I believe that in all cases the Dacian die-engraver did have an actual Republican denarius at hand; i.e., there is no identifiable Dacian phenomenon of "copies of copies," as is sometimes seen with Celtic imitations.

1. *Obverse*: Head of Roma right.

*Reverse*: Uncertain figure in biga left, X below horse's legs, V SEMP in exergue.

18 mm, 3.82 g. The number of horses' legs makes it clear that a biga is intended, although only a single horse is depicted.

2. *Obverse*: Head of Roma right, pseudo-legend behind.

*Reverse*: Victory in triga right, pseudo-legend above and below horses and in exergue.

19 mm, 3.87 g. A quadriga is probably intended on the reverse. Overstruck on uncertain type; remnants of undertype legend visible at left edge of obverse.

3. *Obverse*: Head of Roma right.

*Reverse*: Victory in quadriga right, trace of legend in exergue.

18 x 16 mm, 3.10 g.

4. *Obverse*: Laureate head of Apollo right, thunderbolt below, VAM behind.

*Reverse*: Dioscuri riding right, A(?)CH below.

18 mm, 4.89 g. Obverse imitates Mn. Fonteius, *RRC* 353/1, struck in 85 BC.

5. *Obverse*: Diademed head of Venus right, crude SC behind.

*Reverse*: Victory in biga right, pseudo-legend below horses and in exergue.

17 mm, 2.79 g. Obverse imitates C. Naevius Balbus, *RRC* 382/1, struck in 79 BC.

6. *Obverse*: Bust of Cupid right.

*Reverse*: Uncertain figure in biga right, VTT in exergue.

18 mm, 2.38 g. Obverse imitates Cn. Egnatius Maxsumus, *RRC* 391/92, struck in 76 BC.<sup>3</sup>

While small, this hoard is interesting in several respects. I know of only one other hoard comprised *solely* of imitations, 15 coins presently in Belgrade (Popović 1974). Also, although the Dacians in general were seemingly quite indifferent to the weights of their coins, the range here, from 2.38 g to 4.89 g, is dramatic and noteworthy in such a tiny sample. The latest datable Republican prototype was struck in 76 BC, so the hoard must have been hidden after that date. How much later cannot be determined with any confidence. These coins show clear evidence of wear from circulation, not always the case with imitations; that fact, combined with the inference drawn from the dies described above, indicate that the hoard *may* have been secreted quite a bit later than 76 BC, even well into Imperial times. If the undertype of no. 2 could be identified, that might of course clarify the closing date of the hoard.

Although not part of the hoard, two other imitations said to have been found at Sarmizegetusa Regia may perhaps add depth to it. Both were offered by the same source as was the hoard. The first was acquired by the owner of the hoard at the same time as it; the second was obtained by the author in April, 2005.

7. *Obverse*: Bust of Roma right, RISAIΛ behind, R above.

*Reverse*: Hercules left, strangling the Nemean lion, club at his feet, bow and arrow in case before, CEPBIVCIVS behind, C behind lion.

19 mm serrate, 3.33 g. Imitates C. Poblicius, *RRC* 380/1, struck in 80 BC.

8. *Obverse*: Head of Roma right, remnants of ROMA behind.

*Reverse*: Victory in biga right, garbled legend below.

18 mm, 3.46 g. Imitates L. Flaminius Chilo, *RRC* 302/1, struck in 109–108 BC.

### ACKNOWLEDGEMENTS

Thanks to Radu Ardevan for generously providing an invaluable English synopsis of the paper by Glodariu et. al. and for other valuable suggestions, and of course, to the owner of the hoard for making it available for study.

3. Date according to the dictates of the Mesagne Hoard (Hersh and Walker 1984).

## REFERENCES

- RRC = Crawford, M. H. 1974. *Roman Republican Coinage*. Cambridge.
- Davis, P. 2006. Dacian imitations of Roman Republican *denarii*. *Apulum* 43 (1): 321–56.
- Depeyrot, G., and D. Moisil. 2003. *Les trésors de deniers antérieurs à Trajan en Roumanie*. Wetteren.
- Glodariu, I., E. Iaroslavschi, and A. Rusu. 1992. Die Münzstätte von Sarmizegetusa Regia. *Ephemeris Napocensis* 2: 57–68. Cluj-Napoca.
- Hersh, C., and A. Walker. 1984. The Mesagne Hoard. *American Numismatic Society Museum Notes* 29: 103–134.
- Popoviac, P. 1973–74. Hoard of Imitations of Roman Republican *Denarii* from the Belgrade National Museum. *Numizmatikai Közlöny* 72–73: 7–13.

## Hoard Notes: A Roman Republican Silver Coin Hoard from Campania

RICHARD SCHAEFER

Some years ago, a hoard of Roman Republican silver coins, all *denarii* except for two *quinarii* and one *victoriatus*, was found in Campania. The approximately 500 coins extend from an early *quinarius* (RRC 44/6, c.211 BC) down to *denarii* of P.PAETUS (RRC 233/1, 138 BC). Apart from the two *quinarii* (RRC 44/6 and RRC 98A/3) which are quite worn, the coins from the earliest down to the PVR *denarii* show little difference in wear, varying randomly from slight to moderate. This indicates the owner had chosen the least worn coins in circulation year by year, rather than at the time of deposit.

After the PVR *denarii*, the wear becomes progressively less until, after L.CVP (RRC 218/1, 147 BC), the coins show no wear. The owner probably obtained this last group shortly after they had been struck at the mint. The hoard was closed after 138 BC, following Crawford's chronology.

There are a few oddities. That the two *quinarii* are far more worn than the other coins is puzzling. And why a *victoriatus*? The presence of a few *victoriati*, rather than none, in predominantly denarius hoards is in reality common, as a perusal of *Roman Republican Coin Hoards* by M. H. Crawford (1974), will reveal. Yet the fact that almost all Republican hoards of *denarii* or *victoriati* are predominantly one or the other indicates that the lower fineness of *victoriati* was well known. Why a hoarder of *denarii* should have often included a few *victoriati* is hard to explain.



From the Star issue (RRC 113/1, 206–195 BC) onward, all common denarius issues are present, except Griffon (RRC 182/1), AV RVF (RRC 221/1), C.CVR (RRC 223/1), C.TITINI (RRC 226/1) and C.RENI (RRC 231/1). The absence of the very common C.RENI suggests it came after CN.GELI and C.PAETVS, all three dated to 138 BC by Crawford, but such precision must await more published hoard evidence. The relatively large numbers of the latest issues (distinguished by the lack of wear) increases the probability that this hoard contains those issues in circulation at its closure in 138 BC. Apart from the missing C.RENI, the hoard accords well with Crawford's chronology.

In the following list of the hoard, the quantity, Crawford classification and moneyer's name (or mintmark) is given for each issue. All are *denarii* unless otherwise stated. Also, mint locations given by Crawford other than Rome or Central Italy are noted. In the three cases where quantity = ?, the issue was present, but no further precision is now possible. In one of these cases, the twelve Crescent *denarii*, at least two were the later issue (RRC 137). Since it is not known whether the other ten were the first (RRC 57/1) or second issue, all twelve are listed below as RRC 137/1. Also, due to lack of precise information some quantities are given only as a range.

### ACKNOWLEDGEMENTS

I wish to thank Rick Witschonke and Charles Hersh<sup>†</sup> for several valuable corrections and suggestions.

Quantity	RRC	Mintmark/Moneyer
1	44/6 (worn)	Anon. Quinarius
7	53/2	Anon.
3	61/1	Victory
1	68/1b	Anon.—Sicily
1	72/3	Wheatear—Sicily
1	78/1	Staff—Sicily
1	79/1	Wheel
2	80/1a	Dolphin
2	89/2	Club—SE Italy
1	92/1b	<i>Victoriat</i> (No CROT)
1	98A/3 (worn)	L Quin. Luceria
2	106/3b	Staff
1	109/1	Knife
1	110/1a	Wreath
1	112/2a	Staff (Obverse)
4	113/1	Star
5	114/1	Rostrum Tridens
1	115/1	Trident
1	116/1a	Bull left
1	116/1b	Bull right

Quantity	RRC	Mintmark /Moneyer
1	127/1	Woman's Head
3	130/1a	Feather
1	130/1b	Feather
*2	133/2b	TAMP
1	134/1b	LPLH
2	135/1	Owl
12? (cf. Above)	137/1	Crescent
4	139/1	Anon.
3	140/1	Anon.
1	141/1	Bird + TOD
1	156/1	Prawn
1	157/1	Cornucopia
1	159/1	Fly
1	162/2	MAT
*1	165/1a	Anchor
1	165/1b	Anchor
*4	167/1	Anon.
1	169/1	GR
1	172/1	MA
2	187/1	PVR
4	197/1a	Anon.
3	198/1	Anon.
2-3	199/1a	SAR
2-3	199/1b	SAR
2-3	200/1	NAT
*2-3	201/1	C.SCR
3-4	203/1a	C.MAIANI
20-30	204/1	L.SAVF
20-30	205/1	P.SVLA
20-30	206/1	SAFRA
20-30	207/1	FLAVS
20-30	208/1	NATTA
1	209/1	L.ITI
20-30	210/1	C.IVNI.C.F.
20-30	214/1a	M.ATIL
20-30	214/1b	M.ATILI
20-30	215/1	Q.MARC
20-30	216/1	L.SEMP
20-30	217/1	C.TER.LVC
20-30	218/1	L.CVP
*10-15	219/1e	C.ANTESTI (No wear)
*?	220/1	M.IVNI (No wear)
?	222/1	Anon. (No wear)
1	228/1	C.VAL.C.F. (No wear)
2	228/2	C.VAL.C.F.
10-15	232/1	CN.GELI (No wear)
20-30	233/1	P.PAETVS (No wear)

## ILLUSTRATIONS



1. RRC 133/2b TAMP monogram denarius (4.01 g)



2. RRC 165/1a Anchor denarius with F type helmet.  
The weight is low, but the coin appeared to be good silver (2.99 g)



3. RRC 167/1 Anonymous denarius with small rear horse (3.74 g)



4. RRC 201/1 C.SCR denarius (3.67 g)



5. RRC 219/1e C.ANTESTI denarius (3.65 g)

6. RRC 220/1 M.IVNI denarius (4.17 g)

## On Some Rare Early Qarākhānid Fulūs

PLATES 112–116

RALPH A. CANNITO\* AND MICHAEL N. FEDOROV\*\*

Some rare early-Qarākhānid coins are presented and discussed as an important source for the numismatics and early history of the Qarākhānid khaqanate (AD 940s–1212/13), the first feudal state of Central Asia created and ruled by the Muslim Turks.

Chronicles written about the Qarākhānid khaqanate have not survived, and information on the Qarākhānids in the contemporary chronicles of the Gaznavids, Saljūqids, Khwārizmshāhs, or in the chronicles written after the Qarākhānids ceased to exist (Ibn al-Athīr and later) is scarce, obscure, and sometimes contradictory. Qarākhānid coins are therefore an important, and sometimes the only, source for some periods in the history of the Qarākhānids. These coins provide information on the Qarākhānid rulers' chronology and genealogy, the composition and changes of their appanage domains, the internecine wars, the changes to the Eastern and the Western Qarākhānid khaqnates' borders caused by these wars, and so on. Often even a single Qarākhānid coin is an indispensable bearer of valuable information.

In the middle of the tenth century, the nephew of the Kāshghar ruler Oghulchaq Qadīr Khān, Satuq Boghrā Khān son of Bazir Arslān Khān, clandestinely converted to Islam, fled from Kāshghar to Atbāsh, and raised an army with the help of

\* 83 Mine Hill Road, Washington, NJ 07882–4147.

\*\*Ida-Dehmel-Ring 64, D-68309 Mannheim, Germany.

Muslim ghāzīs. He routed his uncle in a jihād and took Kāshghar. Satuq died there in AH 344/AD 955. In 349/960, his son Arslān Khān Mūsā proclaimed Islam the state religion. Thus was created the Qarākhānid khaqanate, the first feudal state ruled by Muslim Turks (Fedorov 2000a, 1).

In 382/992, Qarākhānids started the conquest of the Sāmānid state. It was completed in October 999, with the capture of the Sāmānid capital Bukhārā and the imprisonment of the Sāmānid *amīr* ‘Abd al-Malik II b. Nūḥ (February–October 999). The Qarākhānid khaqanate extended from Khotan–Yarkend–Kāshghar to Bukhārā–Samarqand, but soon split into the Western Qarākhānid khaqanate, comprising central and eastern Central Asia, and the Eastern Qarākhānid khaqanate, comprising eastern Turkestan and, sometimes, eastern regions of Central Asia. In 1212–1213, the Khwārezmshāh Muḥammad conquered the Western Qarākhānid khaqanate and put an end to the Western Qarākhānid dynasty (Fedorov 2000a, 1–3). The first Qarākhānid coin was minted in Farghāna in 381/991–992 (Kochnev 1995, 203).

Qarākhānid coinage is very complicated. The rulers had many *laqabs* (honorary titles), and they changed titles during their career. Often we find on Qarākhānid coins only a *laqab*, without the ruler’s name. The coins mention two or three different people, who may be the suzerain, a vassal, or a subvassal. This means that many rulers are hidden behind anonymous *laqabs*. The most important (and difficult) task of a scholar of Qarākhānid numismatics is to identify an anonymous *laqab* with some Qarākhānid ruler cited on other coins or mentioned in the chronicles.

The name and title, the mint name, and the date on Qarākhānid coins provide important historical evidence for both the political structure of the Qarākhānid khaqanate and the details of political events. A full and careful description of the coins is necessary, because a comparison of different combinations of names and titles mentioned on various types of coins allows one to pinpoint changes in the political history of this or that town, or even of the whole Qarākhānid khaqanate, within this or that period, or even within the same year. This is why we aim to give a detailed description of each coin, accompanied when necessary with commentary on its historical background and the new information it provides.

The disposition of titles and names on these coins follow some conventions that allow one to distinguish their hierarchy. The suzerain or independent ruler is mentioned on the reverse after the honorific mention of the caliph, the spiritual head of the Muslim world. After the suzerain, the vassal is mentioned. The subvassal is usually mentioned on the obverse. Sometimes both vassal and subvassal appear on the obverse. In this case, the vassal is mentioned above the *kalima* and subvassal below the *kalima*. Sometimes, a vassal or subvassal is mentioned both above and below the *kalima*. If a town belonged directly to the suzerain, only his title would appear, and then on both the reverse and the obverse.

The coins described below are mostly unpublished. Some of them were mentioned in the *Corpus of Inscriptions on the Qarākhānid Coins: Anthroponyms and Titles*, by Kochnev (1995, 2004). But since this catalogue included only titles and names, it is not comprehensive. It lacks metrological data, illustrations, and a description of all the legends. Moreover, there are several mules among the coins described in this article. There were three main reasons for the appearance of such mules: (1) the mint official could give a stamper the mismatched dies by mistake; (2) one of the dies could be broken and, in order not to stop the work, some old die could be used; and (3) the dies could be mismatched deliberately for political reasons. For example, the coins in a town cited both a suzerain and a vassal. Then the suzerain became direct ruler the town. So one of the dies, citing the vassal, was replaced by some old die that did not cite any vassal.

### CATALOGUE

The abbreviations used are: C: solid-line circle; 2C: two solid-line circles; BC: beaded circle; ILC: interlaced-line circle; NC: circle made of short radial (or slanted) notches; CL: circular legend; ICL: inner circular legend; OCL: outer circular legend; MDS: mint-date formula forms a square on the sides of central legend.

1. Farghāna, (3)84/994–995: 2 g, 26.8 mm. Pl. 112, 1.

*Obv.* Within C: لا / اله الا الله وحده / لا / شريك له. On the sides of both words لا there are two crescents.

CL: [sic] بسم الله ضربهذا الفلاس بفرغانه سنة اربع ثمانين

*Rev.* Within C: الله / محمد / رسول / نصر. On the sides of the words الله and الله, there are two crescents.

CL: ما امر به الأمير نصر بن علي مولى امير المؤمنين

This coin was minted by the Qarākhānid ruler Naṣr b. ‘Alī, citing no suzerain.

2. Khojende, 384/994–995: 2.92 g, 25.9 mm. Pl. 112, 2.

*Obv.* Within C: لا اله الا / الله وحده / لا شريك له

CL: بسم الله ضربهذا الفلاس بخجنده سنة اربع ثمانين ثلثمائة

*Rev.* Within C: الله / محمد / رسول / الله / تكين

CL: ما امر به الأمير الجليل نصر بن علي ايده الله

This coin was minted by Naṣr b. ‘Alī, with the title Tegīn, citing no suzerain.

3. Farghāna, 385/995: 3.04 g, 27.5 mm. Pl. 112, 3.

*Obv.* Within C: quatrefoil cartouche with three dots in each leaflet. At the cartouche's sides are four ringlets. Within it are three concentric squares (linear, beaded, linear). Within the squares is a ringlet.

CL: [sic] بسم الله ضربهذا الفلاس بفرغانه سنة خمس و ثمانين و

Rev. Within C: لله / محمد / رسول الله / أمير الجليل / نصر بن / على

CL: [sic] ما امر به الأمير الجليل مؤيد [sic] تغان تكين مولى أمير لمن [sic]

This coin was minted by Naṣr b. 'Alī, with the title Toghān Tegīn, citing no suzerain.

4. Uṣrūshana, 387/996–997: 2.43 g, 26.4 mm. Pl. 112, 4.

Obv. Within C: linear square. Within it اسرو / شنه. On the sides of it:

لا اله الا / الله و / حده لا / شريك له

CL: بسم الله ضربهذا الفلاس سنة سبع و ثمانين و ثلثمائة

Rev. Within BC: لله / محمد / رسول الله / تكين / الجليل

CL: ما امر به الامير الجليل نصر بن على ابقاه الله

This coin was minted by Naṣr b. 'Alī, with the title Tegīn al-Jalīl, citing no suzerain.

5. Farghāna-Ush, 387/997: 3.36 g, 27.9 mm. Pl. 112, 5.

Obv. Within 2C with four ringlets dividing 2C in four equal parts:

اوش / لا اله الا / الله وحده / لا شريك له

CL: بسم الله ضربهذا الفلاس بفرغانه سنة سبع و ثمانين [sic] و ثلثمائة

Rev. Within BC (outer) and C (inner): لله / محمد / رسول الله / نصر بن / على

CL: ما امر به الامير الجليل المؤيد العدل طنقا تكين مولى امير المؤمنين

Minted by Naṣr b. 'Alī, with the title Ṭonkā Tegīn and the *laqab* al-Mu'ayīd al-'Adl, citing no suzerain.

6. Farghāna, (3)88/998: 3.1 g, 26.5 mm. Pl. 112, 6.

Obv. Within small BC: خان. On the sides of it: لا اله الا / الله وحده / لا شريك له, placed so that it forms a triangle. All this is within a large BC.

CL: بسم الله ضربهذا الفلاس بفرغانه سنة ثمان...

Rev. Within BC: لله / محمد / رسول الله / تكين / الجليل

CL: ما امر به الامير الجليل المؤيد العدل طنقا تكين ابي حسن مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī, with the title Ṭonkā Tegīn, *laqab* al-Mu'ayīd al-'Adl, and the *kunya* Abū al-Ḥasan (i.e., father of Ḥasan), citing no suzerain.

7. Farghāna, 3(9)1/1000–1001: 3.24 g, 28.6 mm. Pl. 112, 7.

One side. In the field: لا اله الا / الله وحده / لا شريك له

ICL: [sic] بسم الله ضربهذا الفلاس بفرغانه سنة احا [sic, should be

The date was engraved with mistakes. The word "one" (engraved as احا instead of احدا) is followed by the word "three hundred." Of course it cannot be "301" since the Qarākhānid khaghanate did not exist in AH 301. And it can be only "3(9)1," since it was not earlier than AH 388 that Naṣr b. 'Alī accepted the title of Ilek, which is higher than the title Tegīn (Prince) and next only to the title of Khān.

*OCL*: ما امر به الخان العدل ناصر الحق ابو نصر قرا خاقان. In the outer legend is cited Nāṣir al-Ḥaqq Abū Naṣr Qārā Khāqān. The *laqab* Nāṣir al-Ḥaqq and *kunya* Abū Naṣr belonged to Aḥmad b. 'Alī, the brother and nominal suzerain of Naṣr b. 'Alī (Fedorov 2001, 20–21).

*Other side*. Within *BC*: الله / محمد / رسول الله / مؤيد العدل / ايلك. Here is the higher title of Naṣr "Ilek."

*CL*: [sic] ما امر به الأمير الأجل نصر بن علي مولى امير المؤمنين

This coin was minted by the Ilek Naṣr b. 'Alī citing as suzerain his brother Aḥmad b. 'Alī, the then head of the Western Qarākhānīds. This coin is a mule minted by dies of two different coins. A normal coin could not have two circular legends starting with the formula ما امر به ("from he who ordered [to mint]"), denoting the ruler by whose order this coin was minted.

8. Ilāq, 389/998–999: 2.33 g, 26.5 mm. Pl. 112, 8.

*Obv*. Within *C*: منصور / بن احمد

*ICL*: لا اله الا الله وحده لا شريك له سعيد

*OCL*: بسم الله ضريهذا الفليس بايلاق سنة تسع و ثمانين و ثلثمائة

*Rev*. Within *BC* (outer) and *C* (inner): الله / محمد / رسول الله / تكين / ابالصالح

*CL*: ما امر به الأمير الجليل احمد بن علي ايده الله

This coin depicts a complicated hierarchy. In the reverse, *CL* is cited the suzerain, Aḥmad b. 'Alī. He was the head of the Western Qarākhānīds. In the reverse field is cited a vassal who had the Turk title Tegīn. In the obverse field is cited the hereditary ruler of Ilāq Manṣūr b. Aḥmad. If the *kunia* Abā Ṣāliḥ and the title Tegīn belonged to him, he was the vassal of Aḥmad b. 'Alī. If the *kunia* Abā Ṣāliḥ and the title Tegīn belonged to another person, then this person was the vassal of Aḥmad b. 'Alī, and Manṣūr b. Aḥmad was the subvassal of Aḥmad b. 'Alī. In the obverse *ICL*, after the *kalima*, is cited a Sa'īd, a sub-subvassal (or could he be a mint official?).

9. Uzgen [sic], 404/1013–1014: 2.7 g, 27 mm. Pl. 112, 9.

*Obv*. Within quatrefoil cartouche: عضد الدولة. Above and under it is an asterisk.

*CL*: بسم الله ضريهذا الفليس باوزكن [sic] سنة اربع و اربعمائه

*Rev*. Within *BC*: الله / محمد / رسول / خان [sic] / الله

*CL*: ما امر به الأمير السيد احمد بن علي مولى امير المؤمنين

This coin was minted by 'Aḍud al-Daula, citing Aḥmad b. 'Alī as suzerain.

10. Sogd, 404/1013–1014: 1.94 g, 27.5 mm. Pl. 112, 10.

*Obv*. Within *BC*: لا اله الا / الله وحده / لا شريك له. Above it an arabesque.

*CL*: بسم الله ضريهذا الفليس بسفد سنة اربع و اربع مائه

*Rev*. Within *C*: الله / محمد / رسول الله / الفادر بالله / احمد بن علي / بافاسيم



To the left of it is a sword. Pictures of the weapon were often placed on Qarākhānid coins during wartime.

*CL:* ما امر به الأمير السيد الملك المظفر قطب الدولة و نصر الله

This coin was minted by Bā Qāsīm, citing Aḥmad b. 'Alī as suzerain.

11. Akhsiket(?) or Khojende(?), 405/1014–1015: 2.04 g, 26.1 mm. Pl. 113, 11.

*Obv.* In the field: خلد / لا اله الا / الله وحده / لا شريك له

*ICL:* بسم الله ضرب هذا الفلاس (باخسيكت؟ or بخجنده؟) سنة خمس و اربع مائة

*OCL:* ما امر به الأمير شمس ال... مولى امير المؤمنين

*Rev.* Within C: الله / محمد / رسول الله / احمد بن ابيك... The word الله is within a crescent.

*CL:* ما امر به الأمير الجليل السيد العدل ابو العباس مولى امير المؤمنين

On the reverse is cited a vassal, Abū al-'Abbās Aḥmad b. Ilek. In the obverse

*OCL* is cited Shams al-... (suzerain). In the field above the second half of the *kalima*, Khalid (subvassal) is cited.

12. Samarqand, 407/1016–1017: 2.8 g, 26.5 mm. Pl. 113, 12.

*Obv.* Within C (inner) and NC (outer): خافان / لا اله الا / الله وحده / لا شريك له

*CL:* بسم الله ضرب هذا الفلاس بسمرقند سنة سبع و اربع مائة

*Rev.* Within 2C with NC in between:

سنان الدولة / محمد / رسول الله / القعدر [sic!] بالله

*CL:* ما امر به الأمير الاجل العادل محمد بن علي مولى امير المؤمنين

This coin was minted by Muḥammad b. 'Alī citing certain Khāqān as suzerain. On the reverse, in the field above the main legend, is the *laqab* of a subvassal, Sinān al-Daula, written in small letters.

13. Shāsh, 407/1016–1017: 3.24 g, 26.5 mm. Pl. 113, 13.

*Obv.* Within BC (inner) and C (outer): بادشا / عادل. Between these words is a picture of a fish turned to the right. On the sides of each word is a ringlet. Below the word عادل is a dot.

*CL:* بسم الله ضرب هذا الفلاس بالشاش سنة سبع و اربع مائة

*Rev.* Within BC (inner) and C (outer): الله / محمد / رسول الله / ابيك

*CL:* ما امر به الأمير الجليل الملك العادل محمد بن علي

This fals was minted by Muḥammad b. 'Alī, citing no suzerain. On copper coins minted for domestic petty trade, the suzerain sometimes was not cited.

14. Shāsh, 407/1016–1017: 3.24 g, 26.5 mm. Pl. 113, 14.

Coin of the same type, but the reverse *CL* differs:

ما امر به الملك العادل محمد بن علي ابيك

15. Farghāna, 401/1010–1011: 2.21 g, 26.1 mm. Pl. 113, 15.

*Obv.* In the field is a trefoil made of three mutually intersecting semicircles forming a triangle in the center. Within the triangle: بادشا.

On the sides of the trefoil: بسم الله ضربهذا / الفليس بفرغانه / سنة احد اربعمئة

Rev. Within C: الله / محمد / رسول / الله

CL: ما امر به الأمير نصر بن علي مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī, citing no suzerain.

16. Ilāq, (40)9/1018–1019: 2.17 g, 26.7 mm. Pl. 113, 16.

*Obv.* In the field, an equilateral triangle with crescent adjacent to the middle of each side. Within each crescent, three dots. Each apex is crowned by an arabesque. The arabesques divide CL into three parts.

Within the triangle: تكين / بوري

CL: [sic] بسم الله ضر / بهذا الفليس / بابلاق سنة تسع

Rev. Within BC: ابو المظفر / ارسلان خان. Under it, a ringlet within a tiny BC.

CL: [sic] ما امر به الأمير الجليل الملك السيد مولى امير المؤمنين

Būrī Tegīn cites his suzerain Arslān Khān. Inrahīm Būrī Tegīn (the future supreme ruler of the Western Qarākhānids, Ibrahim Ṭafghāh Khān) was the son of Naṣr b. 'Alī, the conqueror of Bukhārā in 389/999.

17. Farghāna, (3)90/999–1000: 2.92 g, 27 mm. Pl. 113, 17.

*Obv.* Within BC: نصر

CL: [sic] بسم الله ضربهذا الفليس بفرغانه سنة تسعين

Rev. Within BC: الله / محمد / رسول الله / نصر / بن علي

CL: [sic] ما امر به الأمير نصر بن علي مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī, citing no suzerain.

18. Qubā, 397(or 9?)/1006–1007(or 1008–9?): 3.9 g, 27.2 mm. Pl. 113, 18.

*Obv.* In the center of the coin within a small C is a picture of a drawn bow with an arrow on a bowstring. Around the circle is the *kalima*:

لا اله الا الله وحده لا شريك له. All this within BC.

CL: بسم الله ضربهذا الفليس بفرغانه سنة سبع (تسع) و تسعين و ثلثمائة

Rev. Within BC: الله / محمد / رسول / الله / نصر

CL: ما امر به الأمير نصر بن علي مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī, citing no suzerain. Qubā was in the central part of Farghāna valley.

19. Uzgend, 398/1007–1008: 3.9 g, 27.2 mm. Pl. 113, 19.

*Obv.* In the center of the coin, within small BC, is something indiscernible (a picture or a word?). Around it is the *kalima*: لا اله الا الله وحده لا شريك له

CL: بسم الله ضربهذا الفليس باوزكند سنة ثمان و تسعين ثلثمائة

Rev. Within BC: الله / محمد / رسول / الله / ايلك

CL: ما امر به الأمير نصر بن علي مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī with the title *Ilek*, citing no suzerain.

20. Shāsh, 396/1005–1006: 1.61 g, 22.1 mm. Pl. 113, 20.

*Obv.* Within C: picture of crouching cheetah (the spots on its skin are clearly visible) with body turned to right and head facing. It has a collar, which indicates that it is a domesticated hunting animal.

*CL:* بِسْمِ اللَّهِ ضَرِيهَذَا الْفَلَسُ بِالشَّاشِ سَنَةِ سِتٍّ وَ تِسْعِينَ ثَلَاثًا

*Rev.* Within BC: يُوْسُفُ / لَّهُ / مُحَمَّدُ / رَسُوْلُ / اللَّهِ

*CL:* يُوْسُفُ بْنُ عَبْدِ اللَّهِ الْجَلِيلِ مَا أَمَرَ بِهِ الْأَمِيرُ

This coin was minted in Shāsh by the *amīr* Yūsuf b. 'Abd Allāh, citing no suzerain.

21. Farghāna, 400?: 2.17 g, 25.8 mm. Pl. 114, 21.

*Obv.* Within C: quatrefoil cartouche. Within it, بادشا / العدل

*CL:* [sic] بِسْمِ اللَّهِ ضَرِيهَذَا الْفَلَسُ بِفَرَاغَانِهِ سَنَةِ أَرْبَعٍ

*Rev.* Within 2C: مُحَمَّدُ / رَسُوْلُ / اللَّهِ

*CL:* نَصْرُ بْنُ عَلِيٍّ مَا أَمَرَ بِهِ الْأَمِيرُ

This coin was minted by Naṣr b. 'Alī in AH 400?, with the title Pādshā(h), citing no suzerain.

22. Farghāna, 400/1009–1010: 3.02 g, 27.7 mm. Pl. 114, 22.

*Obv.* Within ILC: لَا إِلَهَ إِلَّا اللَّهُ وَحْدَهُ / لَا شَرِيكَ لَهُ Above it an arabesque.

*CL:* بِسْمِ اللَّهِ ضَرِيهَذَا الْفَلَسُ بِفَرَاغَانِهِ سَنَةِ أَرْبَعِمِائَةٍ

*Rev.* Within C: مُحَمَّدُ / رَسُوْلُ اللَّهِ / نَصْرُ بْنُ عَلِيٍّ / إِلَيْكَ

*CL:* اللَّهُ الْأَمْرُ مِنْ قَبْلِ وَ مِنْ بَعْدِ وَ يَوْمَئِذٍ يَفْرَحُ الْمُؤْمِنُونَ بِنَصْرِ اللَّهِ. Qu'ran 30:3–4.

This coin was minted by Naṣr b. 'Alī, with the title Ileḳ, citing no suzerain.

23. Ilāq, 400/1009–1010: 4.46 g, 27.2 mm. Pl. 114, 23.

*One side.* In the field: لَا إِلَهَ إِلَّا اللَّهُ وَحْدَهُ / لَا شَرِيكَ لَهُ

*ICL:* بِسْمِ اللَّهِ ضَرِيهَذَا الْفَلَسُ بِإِلَاقِ سَنَةِ أَرْبَعِمِائَةٍ

*OCL:* مَا أَمَرَ بِهِ الْخَتَانُ الْعَادِلُ نَاصِرُ الْحَقِّ أَبُو نَصْرٍ قَرَاخَاقَانُ

*Other side.* Within a circle: اللَّهُ / مُحَمَّدُ / رَسُوْلُ اللَّهِ / بَكْرُ بْنُ مُحَمَّدٍ

*CL:* مَا أَمَرَ بِهِ الْأَمِيرُ الْأَجَلُ أَحْمَدُ بْنُ عَلِيٍّ مَوْلَى أَمِيرِ الْمُؤْمِنِينَ

This coin was minted by Bakr b. Muḥammad, citing as suzerain Aḥmad b. 'Alī.

24. Samarqand, 400/1009–1010: 3.73 g, 27.2 mm. Pl. 114, 24.

*Obv.* Within 2C: لَا إِلَهَ إِلَّا اللَّهُ وَحْدَهُ / لَا شَرِيكَ لَهُ Above it, an arabesque.

*CL:* بِسْمِ اللَّهِ ضَرِيهَذَا الْفَلَسُ بِسَمَرْقَنْدِ سَنَةِ أَرْبَعِ مِائَةٍ

*Rev.* Within ILC: اللَّهُ / مُحَمَّدُ / رَسُوْلُ اللَّهِ / الْقَادِرُ بِاللَّهِ / نَصْرُ بْنُ عَلِيٍّ / إِلَيْكَ

*CL:* اللَّهُ الْأَمْرُ مِنْ قَبْلِ وَ مِنْ بَعْدِ وَ يَوْمَئِذٍ يَفْرَحُ الْمُؤْمِنُونَ بِنَصْرِ اللَّهِ. Qu'ran 30:3–4.

This coin was minted by Naṣr b. 'Alī, with the title Ileḳ, citing no suzerain.

25. Sogd, 400/1009–1010: 3.26 g, 27.8 mm. Pl. 114, 25.  
*Obv.* Within ILC: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.  
*CL:* بسم الله ضربهذا الفلاس بسفد سنة اربع مائه  
*Rev.* Within ILC: لله / محمد / رسول الله / القادر بالله / نصر بن علي / ايلك  
*CL:* لله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.  
 This coin was minted by Naṣr b. 'Alī, with the title *Ilek*, citing no suzerain.
26. Ustrūshana, 400/1009–1010: 2.46 g, 27.5 mm. Pl. 114, 26.  
*Obv.* Within a border of two circles made of ringlets: ايلك. Above it one ringlet, below it two ringlets.  
*CL:* بسم الله ضربهذا الفلاس باسروشنه سنة اربعمئة  
*Rev.* Within the same border: با دشاه. Above it one ringlet, below it two ringlets.  
*CL:* [sic] ما امر به الامير العادل المنصور مولى امير المؤمنين  
 This coin was minted by al-Amīr al-Manṣūr, citing his suzerain, *Ilek Pādshāh* Naṣr b. 'Alī. The supreme suzerain Khāqān Aḥmad b. 'Alī is not cited.
27. Khojende, 400/1009–1010: 3.42 g, 27.2 mm. Pl. 114, 27.  
*Obv.* Within C: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.  
*CL:* بسم الله ضربهذا الفلاس بخجنده سنة اربع مائه  
*Rev.* Within C: ايلك / لله / محمد / رسول الله / نصر بن علي  
*CL:* لله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.  
 This coin was minted by Naṣr b. 'Alī, with the title *Ilek*, citing no suzerain.
28. Samarqand, 401/1010–1011: 2.82 g, 27.7 mm. Pl. 114, 28.  
*Obv.* Within C: لله / لا اله الا / الله وحده / لا شريك له / خصم (?)  
*CL:* بسم الله ضربهذا الفلاس بسمرقند سنة احدى و اربع مائه  
*Rev.* Within ILC: لله / محمد / رسول / الله / نصر بن علي  
*CL:* لله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.  
 This coin was minted by Naṣr b. 'Alī, citing no suzerain. *خصم* is probably the name of his vassal.
29. Samarqand, 401/1010–1011: 2.98 g, 27.6 mm. Pl. 114, 29.  
*Obv.* Within C: لا اله الا / الله وحده / لا شريك له. To the left of it احمد written vertically. Above it, the letter ج.  
*CL:* بسم الله ضربهذا الفلاس بسمرقند سنة احدى و اربعمئة  
*Rev.* Within 2C with ILC in between: لله / محمد / رسول الله / نصر بن علي  
*CL:* لله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.  
 This coin was minted by Naṣr b. 'Alī, citing no suzerain. On the obverse, his vassal, Aḥmad, is cited.

30. Farghāna, 402/1011–1012: 2.41 g, 28.8 mm. Pl. 114, 30.

*Obv.* Small circle inscribed within a linear square. Within the circle are four spokes with the word الله at each spoke's end. On the sides of the square: لا اله الا الله وحده / لا شريك له لادر بالله [sic]. All this is within C. القادر بالله is the mistakenly engraved honorific name of the caliph.

*CL:* بسم الله ضرب هذا الفلاس سنة اثني و اربعمئة

*Rev.* Within ILC: الله / محمد / رسول الله / نصر بن علي

*CL:* ما امر به ..... نصر بن علي مولى امير المؤمنين

This coin was minted by Naṣr b. 'Alī, citing no suzerain.

31. (Ilāq), 403/1012–1013: 2.98 g, 27.7 mm. Pl. 115, 31.

*Obv.* Within 2C with NC in between: سننا / لا اله الا الله وحده / لا شريك له / الدولة

*CL:* بسم الله ضرب هذا الفلاس سنة ثلث و اربعمئة

*Rev.* Within 2C with BC in between: الله / محمد / رسول الله / الملك العادل / ايلك

*CL:* ما امر به الامير السيد الملك المظفر قطب الدولة ناصر الحق

This coin was minted by Sanā al-Daula, i.e., Muḥammad b. 'Alī, the brother of Aḥmad b. 'Alī and of Naṣr b. 'Alī (Fedorov 2001, 22) citing (*rev. CL*) the suzerain, Qutb al-Daula Nāṣir al-Ḥaqq, i.e., the supreme ruler of the Western Qarākhānids, Aḥmad b. 'Alī. Malik al-'Adil Ilek (*rev. field*) is Muḥammad b. 'Alī (Fedorov 2001, 20–21). The mint name is absent (a die engraver's mistake) but quite certainly it is Ilāq, as the following coin shows.

32. Ilāq, 403/1012–1013: 2.77 g, 27.1 mm. Pl. 115, 32.

*Obv.* Within BC: سننا / لا اله الا الله وحده / لا شريك له / الدولة

*CL:* بسم الله ضرب هذا الفلاس بابلق سنة ثلث و اربعمئة

*Rev.* Within BC: الله / محمد / رسول الله / الملك العدل / خان

*CL:* ما امر به الامير السيد الممكن المنصور ارسلان تكين

This coin was minted by Sanā al-Daula Arslān Tegīn, i.e., Muḥammad b. 'Alī (Fedorov 2001, 22), citing as suzerain the Malik al-'Adil Khān, i.e., the supreme Qarākhānid ruler Aḥmad b. 'Alī. But in the reverse *CL* is cited Arslān Tegīn, i.e., Muḥammad b. 'Alī, not Aḥmad b. 'Alī, as on coin 31.

33. Khumrak, 411/1020–1021: 4.31 g, 24.8 mm. Pl. 115, 33.

*Obv.* In the field: ايلك / لا اله الا الله وحده / لا شريك له

*MDS:* [sic] بسم الله ضر / بهذا الفلاس / بخمرك سنة / احد و عشرين اربع

*Rev.* Within BC: الله / محمد / رسول الله / علي بن نصر

*CL:* ارسله بهذي و دين الحق ليظهره على الدين كله و لوكره المشركون. Qur'an 9:33.

This coin was minted by 'Alī b. Naṣr, citing the Ilek, i.e., Muḥammad b. 'Alī (Fedorov 2001, 22) as suzerain.

34. Kushānī, 416/1025–1026: 2.21 g, 25.6 mm. Pl. 115, 34.

*Obv.* Within 2C with BC in between: خان inscribed within a crescent. Above

this word is a ringlet; under this word are three dots. Below the crescent is the title ملك المشرق.

CL: بسم الله ضربهذا الفلاس بكشاني سنة ست و عشر و اربع مائة

Rev. Within 2C with BC in between: طنغا / خان / محمد بن / الحسن

CL: لا اله الا الله وحده لا شريك له محمد رسول الله

This coin was minted in AH 416 in Kushānī by the then supreme ruler of the Western Qarākhānids, Malik al-Mashriq Ṭonghā Khān Muḥammad b. al-Ḥasan.

35. Bukhārā 417/1026–1027: 2.11 g, 24.5 mm. Pl. 115, 35.

Obv. In the field: لا اله الا / الله وحده / لا شريك له. Above it حق, below it Tegin(?) written in Uighur (?).

MDS: بسم الله ضر / بهذا الفلاس ببخار... / سنة سبع / عشر و اربع مائة

Rev. Within BC: الله / محمد / رسول الله / ايلك / ملك

CL: الله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.

This coin was minted by Ḥaqq Tegīn(?), citing as suzerain İlek ('Alī b. al-Ḥasan). Fulūs of AH 418–419 Bukhārā (Kochnev 1995, 250, 688) were minted by Yusuf b. 'Alī, son of 'Alī b. al-Ḥasan (Fedorov 2001, 26). So most probably this Ḥaqq Tegīn(?) was Yūsuf b. 'Alī.

36. Kushānī, 416/1025–1026: 3.18 g, 25.8 mm. Pl. 115, 36.

Obv. Within 2C with BC in between: خان inscribed within a crescent. Above this word is a ringlet; under this word are three dots. Below the crescent is the title ملك المشرق.

CL: بسم الله ضربهذا الفلاس بكشاني سنة ست و عشر و اربع مائة

Rev. Within 2C with BC in between: طنغا / خان / محمد بن / الحسن

CL: لا اله الا الله وحده لا شريك له محمد رسول الله

This coin is of the same type as coin 34.

37. Tūnket, 421/1030: 2.97 g, 23.2 mm. Pl. 115, 37.

Obv. In the field: عبد / لا اله الا / الله وحده لا شر / يك له / قوام الدولة

CL: بما امر ... ملك المظفر ناصر الحق ... بها الدين... Preservation of the legend is bad; only the words بما امر are quite certain. A reading of the other words is less sure.

Rev. In the field: زين الدولة / الحق / لله / محمد / رسول الله. The word لله is within a crescent.

CL: بسم الله ضربهذا الفلاس بتونكت سنة احدى و عشرين و اربع مائة

عبد (obv.) الحق (rev.)- is probably a sub-vassal.

This fals was minted by Qavvām al-Daula Zain al-Daula. Both those *laqabs* belonged to the son of Qadir Khān Yūsuf, Muḥammad, future Boghrā Khān (Fedorov 2001, 19), citing in the obverse CL his suzerain. If the words *Nāẓir al-Ḥaqq* are read correctly, it was Qadir Khān Yūsuf. However, on dirhams of

AH 421 Tūnket (Kochnev 1995, 253, 727), "Qavvām al-Daula Muḥammad b. Qadir Khān" is cited as suzerain "Malik al-Mashriq," i.e., (in this case) Qadir Khān, who also had such a *laqab*.

38. Bukhārā, 424/1032–1033: 2.81 g, 28.7 mm. Pl. 115, 38.

*Obv.* Within C: أرسلان نكين. Above and below it are two crescents with a dot in between.

*CL:* الله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30: 3–4.

*Rev.* Within C: طغفاج خان. Above and below it are two crescents with a dot in between

*CL:* بسم الله ضربهذا الفليس ببخارا سنة اربع و عشرين و اربعمائه

The coin was minted by Arslān Tegīn Yusuf b. 'Alī (Fedorov 2001, 26) citing as suzerain his father Ṭafghāch Khān, i.e., 'Alī b. al-Ḥasan. 'Alī b. al-Ḥasan, who was before that Ilek, accepted the higher khanian title in 424/1032–1033 (Fedorov 2001, 26).

39. Dabūsia, 424/1032–1033: 5.17 g, 28.6 mm. Pl. 115, 39.

*Obv.* Within 2C: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.

*CL:* بسم الله ضربهذا الفليس بدبوسيه سنة اربع و عشرين و اربع مائه

*Rev.* Within 2C: الله / محمد / رسول الله. To the right, three dots; below it, one dot.

*CL:* ما امر به الخان الاجل قطب الدولة و نصر الملة طغفاج بغرا قرا خاقان

This coin was minted by 'Alī b. al-Ḥasan, with the high title of Ṭafghāch Boghrā Qārā Khāqān.

40. Dabūsia, 424/1032–1033: 4.09 g, 28.3 mm. Pl. 115, 40.

*Obv.* Within 2C: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.

*CL:* بسم الله ضربهذا الفليس بدبوسيه سنة اربع و عشرين و اربع مائه

*Rev.* Within 2C: محمد / الله / رسول الله / مهدي. At the sides of the word محمد there are four dots.

*CL:* ما امر به الخان الاجل قطب الدولة و نصر الملة تغفاج [sic] بغرا قرا خاقان

This coin was minted by 'Alī b. al-Ḥasan, with high title of Ṭafghāch Boghrā Qārā Khāqān. This title is written with T (ت), not with the usual Ṭ (ط). On the reverse, the vassal (?) مهدي (Mahdī?) is cited.

41. Kharashket, 403/1012–1013: 4.34 g, 27 mm. Pl. 116, 41.

*Obv.* In the field: لا اله الا / الله وحده / لا شريك له

*CL:* بسم الله ضربهذا الفليس بخرشكت سنة ثلث و اربع مائه

*Rev.* Within C: الله / محمد / رسول الله / الملك العادل / خان. The word الله is within a crescent.

*CL:* ما امر به الامير السيد احمد على [sic] مولى امير المؤمنين

The coin was minted by supreme Qarākhānid ruler Aḥmad b. 'Alī, as direct owner of the town. Kharashket was situated in Ilāq (the valley of the Angren River), not far from the confluence of Angren and Syr Daria. It is identified with the archaeological site of Kanka hillfort, in the Tashkent oblast' of Uzbekistan.

42. Dakhket, 403/1012–1013: 3.3 g, 28.1 mm. Pl. 116, 42.

*One side.* In the field: لا اله الا / الله وحده / لا شريك له

*ICL:* بسم الله ضربه هذا الفلاس بدخكت سنة ثلث و اربع مائة

*OCL:* ما امر به الجان العادل ناصر الحق سيد ... قراخاقان

*Other side.* Within C: الله / محمد / رسول الله / سنا الدولة / جان. The word الله is within a crescent.

*CL:* ما امر به الامير الاجل محمد بن علي مولى امير المؤمنين

This coin must be a mule minted by dies of different coins. Since, one side of the coin states that it was minted by the order of one person while the other side asserts that it was minted by the order of another. On one side, in *CL* after the formula ما امر به is cited Nāsir al-Ḥaqq Qarākhāqān (the then supreme ruler of Western Qarākhānids Aḥmad b. 'Alī). On the other side of the coin in *CL* after the formula ما امر به is cited Muḥammad b. 'Alī, brother and vassal of Aḥmad b. 'Alī. In the field is the *laqab* Sanā al-Daula, which belonged to Muḥammad b. 'Alī (Fedorov 2001, 22). Dakhket or Adakhket was a town in the province of Ilāq, south of the Angren River and east of Tūnket, closer to the mountains with the famous silver mines of Kuhisīm (Bartold 1963, 231).

43. Kharashket, 404/1013–1014: 2.26 g, 28.1 mm. Pl. 116, 43.

*Obv.* In the field: خاقان. Above and under it an arabesque.

*ICL:* [sic] الله الامر من قبل و من بعد و يومئذ يفرح ام Qur'an 30:3–4.

*OCL:* بسم الله ضربه هذا الفلاس بخرشكت سنة اربع و اربعمائة

*Rev.* Within 2C with BC in between: الله / ايل (ط or ظ) او (ك or د or ذ). The word الله is within a crescent.

*CL:* [sic] ما امر به الامير السيد احمد بن علي مولى امير المؤمنين

This coin was minted in the name of Aḥmad b. 'Alī. The word in the center of the reverse is obscure. Kochnev (2004, 283) read it as the Turkic word *Il-Külüg*. But the reading "*Külüg*" is unacceptable, since the fifth letter is a distinct ا (*alif*) linked to the preceding letter but not to the following letter. The loop of the fourth letter is closed (compare it to the seventh letter, opening to the left). So the fourth letter is ط or ظ. The last letter could be ذ or د or ك. The most plausible reading is ك. The Turkic word *Il/El* meant people, tribe, clan, and state. So it could be "*Il Something*" or "*Something of Il*." This "*Il Something*" could be the vassal's name, or it could be the honorary epithet of Aḥmad b. 'Alī.



44. Khojende, 404/1013–1014: 3.44 g, 27 mm. Pl. 116, 44.

*Obv.* In the field: لا اله الا / الله وحده / لا شريك له / محمد

*ICL:* [sic] بسم الله ضربهذا الفلّس بخجنده سنة اربع و اربع

*OCL:* ما امر به الامير الجليل السيد...المظفر (?) مولى امير المؤمنين

*Rev.* Within C: الله. The wor لله / محمد / رسول الله / سنا الدولة بو / الحق (محمد؟) is within a crescent.

*CL:* [sic] ما امر به الامير الجليل المظفر المنصور مولى امير المؤمنين

This coin was minted by Sanā al-Daula Bū (= Abū) al-Ḥaqq (*rev.* field) Muḥammad (*obv.* above the *kalima*), i.e., Muḥammad b. 'Alī. Some Qarākhānids had several *kunyas*. The *kunya* Abū al-Ḥaqq, belonging to Muḥammad b. 'Alī, was not seen prior to him (Fedorov 2001, 22). It is a mule minted with mismatched dies, since it has two *CLs* starting with the formula ما امر به ("from he who ordered"). Amīr al-Manṣūr cited in the *rev.* *CL* was the future Arslān Khān Manṣūr b. 'Alī (Fedorov 2007, 9).

45. Dabūsia, 424/1032–1034: 3.17 g, 28.7 mm. Pl. 116, 45.

*Obv.* Within 2C: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.

*CL:* بسم الله ضربهذا الفلّس بدبوسيه سنة اربع و عشرين و اربع منه

*Rev.* Within 2C: الله. At the sides of it, four dots. Under it, one dot.

*CL:* ما امر به الخان الاجل قطب الدولة و نصر الملة تفجاج [sic] بغرا قرا خاقان

This coin was minted by Tafghāch Boghrā Qarākhān as direct ruler of Dabūsia. The title Tafghāch is written with ت ("T"), not with ط ("Ṭ") as is usual.

46. Dabūsia, 424/1032–1034: 2.84 g, 28.6 mm. Pl. 116, 46.

*Obv.* Within 2C: لا اله الا / الله وحده / لا شريك له. Above it, an arabesque.

*CL:* بسم الله ضربهذا الفلّس بدبوسيه سنة اربع و عشرين و اربع منه

*Rev.* Within 2C: الله. At the sides of it, three dots. Under it, one dot.

*CL:* ما امر به الخان الاجل قطب الدولة و نصر الملة طففجاج بغرا قرا خاقان

The coin is minted by Tafghāch Boghrā Qarākhān as direct ruler of Dabūsia.

47. Kermīne, 427/1032–1034: 4.49 g, 29.4 mm. Pl. 116, 47.

*Obv.* Within 2C: لا اله الا الله / وحده لا شريك له / بادشاه. Above it, an arabesque.

*CL:* بسم الله ضربهذا الفلّس بكرمينه سنة سبع و عشرين و اربعمئة

*Rev.* Within 2C with a circle made of ringlets in between: لله / ابناج كوكتو / ن. At the sides of لله and ن, there are two dots.

At the sides of لله and ن, there are two dots.

*CL:* لله الامر من قبل و من بعد و يومئذ يفرح المؤمنون بنصر الله. Qur'an 30:3–4.

This coin was minted by a Turk appanage ruler Inānch Kūk Tūn, citing no suzerain.

## DISCUSSION

**Coin 1 (Farghāna, 384).** In Rabī' I 382/May 992, the Qarākhānid ruler of Balāsāghūn and Ṭarāz, Boghrā Khān Hārūn, took Bukhārā. Sāmānid *amīr* Nūh II b. Maṣṣūr fled to Amūl and started to raise an army. The chronicles relate that the climate and food of Bukhārā exacerbated Hārūn's illness. So he went to Samarqand, but that did not help, and he died on the way to his capital, Balāsāghūn. However, the coins show that there were two Qarākhānid invasions. One, launched from Balāsāghūn, ended in the capture of Bukhārā, while another ended in the conquest of eastern Farghāna. The Qarākhānid mint of Farghāna started to work in 381/991–992 (Kochnev 1995, 203). It minted dirhams citing Arslān Tegīn b. Ulugh Tegīn and his suzerain *Shihāb al-Daula* Abū Mūsā Turk Khāqān. Bīrūnī (1957, 150) wrote that Boghrā Khān, "when he took the field in the year 382 [AH], named himself *Shihāb al-Daula*." Could the Arslān Tegīn cited on dirhams of AH 381 Farghāna be Naṣr b. 'Alī? In this case, his father Ulugh (Great) Tegīn should be the ruler of Kāshghar, 'Alī b. Mūsā, who headed the Qarākhānids at least since 382, when Boghrā Khān died. The chronicles mention this 'Alī b. Mūsā as "Arslān Khān." He died in combat with the infidel Turks in Muḥarram 388 = January 998 (Bartold 1963, 330). Either way, the AH 384 fals is the earliest coin (so far) of Farghāna to have the name of Naṣr b. 'Alī.

**Coin 2 (Khojende, 384).** Naṣr b. 'Alī headed the Qarākhānid drive to the west after the death of Boghrā Khān Hārūn. Kochnev (1995, 203) mentioned a coin minted in 383/993–994 by Naṣr in Khojende. But the Sāmānids regained Khojende after the death of Boghrā Khān Hārūn. In 383–384/993–995, Khojende coins were minted by the Sāmānid *amīr* Nūh II or by Nūh II and the governor Bahrām. There are, however, fulūs of AH 383–384 Khojende minted by Ilek Naṣr b. 'Alī. V. Kalinin (2000, 16) opined that "during AH 383–384 Khojende changed hands several times." That would have been impossible. The Sāmānid *amīr* lacked the military power to retrieve Khojende, if lost. His generals disobeyed him and fought each other for the governorship of Khurāsān, one of the richest provinces of the declining Sāmānid state. There could be other explanations. Some coins were minted from mismatched dies, one of which had an obsolete date. Thus the AH 383 fals of Khojend citing Naṣr b. 'Alī cannot be used as a reliable evidence that he took Khojende in 383/993–994. On the other hand, the AH 384 Khojende fals is reliable evidence that in AH 384 Naṣr b. 'Alī possessed Khojende, which means that all of the Farghāna situated to the east of Khojende belonged to him too.

In the autumn of 386/996, Naṣr invaded the Sāmānid state. The Sāmānids ceded to him their lands east of the Qaṭwān steppe, five farsakhs (thirty kilometers)

east of Samarqand (Bartold 1963, 324). In Dhū-l-Qa'da 389 (October 999), Naṣr took Bukhārā. He left a governor and returned to Uzgend, where he imprisoned the last Sāmānid *amīr* 'Abd al-Malik II b. Nūḥ and his relatives (Baihaqī 1962, 566; Bartold 1963, 329). The Sāmānid epoch came to an end. Mawarānnahr was included in the Qarākhānid khaqanate, the first feudal state of Muslim Turks.

**Coin 5 (Farghāna-Ush, 387).** Under the Sāmānids, the main town of Farghāna was Akhsiket, and there coins with the mint name "Farghāna" were minted. Having conquered Farghāna, Naṣr b. 'Alī made Uzgend (the easternmost town of Farghāna) his capital. Now Qarākhānid coins with the mint name "Farghāna" were minted in Uzgend. Starting in 384/994, it minted copious fulūs for the whole of Farghāna province. Sometimes fulūs with the mint name "Farghāna" were minted in other towns of the province. But in those cases the mint name contained a second toponym: e.g., Farghāna-Qubā, Farghāna-Marghīnān, Farghāna-Ush, Farghāna-Akhsiket. There was no mint name Farghāna-Uzgend, since it was understood that the mint with the mint name "Farghāna" operated in the capital, Uzgend (Fedorov 2000, 10). On coin 5's obverse *CL* appears the mint name "Farghāna" and in the field, above the second half of the *kalima*, was the mint name "ush," showing that this coin was minted in Ush, situated about sixty kilometers southwest of Uzgend.

**Coin 8 (Ilāq, 389).** Ilāq was a province in the valley of Angren (Ahangaran), Syr Darya's eastern tributary. Its capital was Tūnket. Its towns included Nūket, Benāket, Khumrak, and Dakhket, where Qarākhānid mints worked for short periods in the eleventh century (Buriakov, Kasymov, and Rostovtsev 1973, 76–108; Belenitskii, Bentovich, and Bol'shakov 1973, 200–201). The name of a province often substituted on coins for the name of its capital. The main mint of Shāsh province was almost always named Shāsh. The name of its capital, Binket, is quite rare on Qarākhānid coins. The name Farghāna often appears on fulūs minted in Uzgend, the Qarākhānid capital of Farghāna. In Ilāq were minted coins either with the mint name Ilāq or Tūnket.

Manṣūr b. Aḥmad was *Dihqān* of Ilāq. *Dihqāns* were a hereditary landowning aristocracy, that is, a ruling class in Central Asia, before the Arab conquest. The conquest dealt them a hard blow. Some lost part of their estates, which were confiscated by the Arabs; others perished. The loss of property weakened them, but even on the eve of the fall of the Sāmānids some *dihqān* families were still very powerful. The family of the *Dihqāns* of Ilāq was among them. The Arab geographer Muqaddasi (c. 985) mentioned the "mighty *Dihqān* of Ilāq;" the author of *Hudud al-'Alam* (c. 982–983) wrote that in ancient times ancestors of the *Dihqān* of Ilāq ruled that country. It is possible that the *Dihqān* of Ilāq regarded the Qarākhānids who started the conquest of the Sāmānid state as liberators. When Hārūn Boghrā Khān took Bukhārā in 992, *Dihqān* Manṣūr b. Aḥmad started to mint Ilāq coins

citing Boghrā Khān as suzerain. Maṣṣūr b. Aḥmad was the founder of the semi-independent dynasty of *Dihqāns* of Ilāq, vassals of the Qarākhānids. The dynasty of the *Dihqāns* of Ilāq existed at least until 401/1010–1011, that is, about twenty years (Fedorov 2001b, 10–13).

Thus coin 8 shows that in 389 the *Dihqān* of Ilāq Maṣṣūr b. Aḥmad recognized Qarākhānid Khān Aḥmad b. ‘Alī as the supreme suzerain. If the title *Tegīn* and *kunia* Abā Ṣāliḥ—belonged not to him but to some other Qarākhānid, the latter was his immediate suzerain. It does not necessarily mean that Abā Ṣāliḥ—resided in Ilāq but that both Qarākhānids had feudal rights in Ilāq: the right to be cited on the fulūs minted there, and more importantly to receive part of the taxes collected in Ilāq.

Coin 9 (Uzgen, 404). Kochnev (2004, 3368a) read the mint name as Tūnket, but this is not possible. The mintname’s final letter has a long, sinuous, uplifted tail. In this fashion in the same *CL* was written the letter *ra* (ر) in the word ضرب and رابع. But the letter *nūn* (ن) was also often written this way. So it is either ر or ن. The final letter in the mint name is linked to the preceding letter; thus it cannot be ر or ن (as they cannot be linked to the following letter). It can be only ك, which is read either as k (Tūnket) or g (Uzgend). So the last two letters may be read as “k.n/k.r” or “g.n/g.r.” The letter ك is preceded by a prong. The prong without diacritical points could denote quite a number of letters. This prong is preceded by letter *vāv* (و). Then a prong follows, linked to a prong half the size. The combination of short and long prongs in the beginning of a mint name denotes the letters ب. If we read the prong between the letters ك and و as ز, we have باوزكن (“in Uzgen”). Modern-day Kirghiz pronounce the name of the town Uzgend as “Uzgen.” The name of the town is also written this way on modern maps. This shows that the elided variant of the town’s name as “Uzgen” existed as far back as the eleventh century. It appears that the die engraver wrote the name of this town as it was pronounced.

Coin 11 (Akhsiket[?] or Khojende[?], 405). This is a strange coin with sloppy and inaccurate legends. Some words are unrecognizable. To begin with, it is a mule minted by different dies, each with the formula ما امر به (“from he who ordered [to mint]”) in a circular legend. On a normal coin, only one such legend could appear, because the formula ما امر به denoted the owner of the town who had the right to mint coins there. The mint name is strange. It could be Akhsiket (اخشيكيت), but the last letter is an annulet, in which manner the letter ت was never written. This was, rather, how the letter ط was written. In such a case, it could be Khojende (خوجنده). In 404–405, in Akhsiket Atim Tegīn (Kochnev 1995, 227, 332–333) minted dirhams citing as suzerain Arslān Khān Maṣṣūr b. ‘Alī (Fedorov 2001, 21–22). The full name and title of the vassal was: Abū al-‘Abbās Aḥmad b. Muḥammad Nāṣir al-Daula Atim Tegīn (Fedorov 2001, 24). In the reverse field of this coin, Aḥmad b. Ilek (the title Ilek belonged then to Muḥammad b ‘Alī) was cited, and in the *CL*

al-*amīr* Abū al-‘Abbās. So far, so good. On the reverse the vassal was cited. On the obverse in the *CL* after the formula *بسم الله* was cited al-*amīr* Shams al-... . Arslān Khān had two *laqabs* beginning with the word “Shams:” Shams al-Daula and Shams al-Milla. But on this coin after the word “Shams” there is nothing like al-Daula or al-Milla, but rather something obscure. It is not out of the question that this coin is an ancient forgery.

Coin 12 (Samarqand, 407). The title Khāqān is on the obverse, above the second half of the *kalima*, where the vassal or subvassal is usually mentioned. This Khāqān was Aḥmad b. ‘Alī, which accounts for the nonstandard location of the name. In AH 408 in Samarqand (Kochnev 1995, 238), dirhams were minted by Muḥammad b. ‘Alī cited Nāṣir al-Ḥaqq Khān (Aḥmad b. ‘Alī) as suzerain. In 407, a peace was made between Manṣūr and Aḥmad. Aḥmad received some of his lost towns (Fedorov 1990, 9). But in almost all of them there were appointed vassals from the allies of Manṣūr b. ‘Alī in his war against Aḥmad b. ‘Alī. The vassals owned these towns, though Aḥmad b. ‘Alī maintained some feudal rights: his name was mentioned on their coins and he received part of their taxes. That was why his title was placed by Muḥammad b. ‘Alī on AH 407 Samarqand fals where a vassal or subvassal was usually mentioned. It was a subtle reminder of his authority. Aḥmad b. ‘Alī all but lost the war and was saved from defeat by the mediation of Khwārizmshāh, who helped the warring Qarākhānids make peace (Fedorov 2007, 1).

Coin 20 (Shāsh, 396). This was minted in Shāsh by *amīr* Yūsuf b. ‘Abd Allāh, without citing a suzerain. But dirhams of this mint, year, and ruler (Kochnev 1995, 213) cite the head of the Western Qarākhānids, Aḥmad b. ‘Alī, as suzerain. Copper coins (serving mainly local petty trade) often do not mention the suzerain. Judging by his title *amīr*, Yūsuf b. ‘Abd Allāh was not simply a governor. Yet it is unclear whether he was a Qarākhānid or a representative of the local aristocracy.

Coin 23 (Ilāq, 400). On one side the circular legend cites the suzerain, head of the Western Qarākhānids, Nāṣir al-Ḥaqq Abū Naṣr Khāqān (Aḥmad b. ‘Alī). On the other side the circular legend again cites Aḥmad b. ‘Alī (the coin is a mule minted by the dies for two different coins), while in the field his vassal Bakr b. Muḥammad *Jān* (?) is cited. Kochnev (1995, 219, 225) reads it as Khān, but such a reading is unacceptable, because the word in question is written with small letters under the name of a Bakr b. Muḥammad. Even Naṣr b. ‘Alī, whose domain was larger than that of Aḥmad b. ‘Alī, did not use the title Khān. Moreover, the obscure Bakr b. Muḥammad, mentioned once on a copper coin of Ilāq, could not adopt the title Khān. The word in question is most probably the Iranian “*Jān*” (soul), and the name in question could be Muḥammad-*Jān*. Another possibility is that *Jān* could be a subvassal’s name.

Most probably Bakr b. Muḥammad was the son of Muḥammad b. Manṣūr, second ruler from the semi-independent dynasty of *Dihqāns* of Ilāq. When Hārūn

Boghrā Khān conquered Bukhārā in 992, *Dihqān* Maṣṣūr b. Aḥmad minted in Ilāq coins citing Boghrā Khān as suzerain. Maṣṣūr b. Aḥmad was founder of the semi-independent dynasty of *Dihqāns* of Ilāq, vassals of the Qarākhānids. He was succeeded by his son, Muḥammad b. Maṣṣūr, not earlier than 389 and not later than 391 (Fedorov 2001b, 12).

**Coin 26 (Uṣrūshana, 400).** In the reverse, al-Amīr al-Maṣṣūr is cited as the vassal of Naṣr b. ‘Alī. No doubt he was the fourth brother and the future Arslān Khān Maṣṣūr b. ‘Alī (Fedorov 2001, 21–22). It may be possible to reconstruct a genealogy thus:

Arslān Khān ‘Alī (fell in battle in the first days of 388/998)

Ṭonghā Khān Aḥmad	Ilek Naṣr	Arslān Khān Maṣṣūr	Ilek Muḥammad
(382–408/992–1018)	(383–403/ 993–1012/3)	(400–415/ 1009–1024/5)	(386–415/ 996–1024/5)

**Coin 33 (Khumrak, 411).** Minted by ‘Alī b. Naṣr, citing Ilel as suzerain. In 404–415/1013–1024, this title belonged to Muḥammad b. ‘Alī (Fedorov 2001, 22). ‘Alī b. Naṣr could be the son of Naṣr b. ‘Alī, the conqueror of Bukhārā in 388/999. Kochnev (1995, 247/643) read the date as “415?” But the date is better read as 411. The space for the date was limited so the letter و was engraved very close to the letter د in the preceding word احد (one). This mislead Kochnev, who read احدو as خمس (five). The letter ا (alif) in the beginning of the digit is quite distinct, so that it must be احد (one). The town of Khumrak was situated in the Angren River valley, in the medieval Ilāk province.

**Coin 34 (Kushānī, 416).** This unpublished coin is important since it shows that in 416 Kushānī minted coins in the name of the head of the Western Qarākhānids, Ṭonghā Khān Muḥammad b. Ḥasan. Kushānī was on the ancient trade route connecting Samarqand and Bukhārā, five farsakhs (thirty kilometers) west of Istikhan, which was seven farsakhs (forty-two kilometers) northwest of Samarqand (Fedorov 2000a, 31). A year before, in 415 in Kushānī were minted coins citing *Arslān Ilel*, i.e., ‘Alī b. al-Ḥasan, brother of Ṭonghā Khān Muḥammad. During part of 416, Kushānī (Kochnev 1995, 247, 249) continued to mint coins citing *Ilek*, i.e., the same ‘Alī b. al-Ḥasan (Fedorov 2000a, 31, 52). Then the situation changed: coin 34 shows that Kushānī passed to Ṭonghā Khān Muḥammad b. al-Ḥasan. This raises the question of what precisely happened.

In 416, the Eastern Qarākhānids headed by Qadir Khān I Yūsuf, son of Boghrā Khān Ḥārūn (who took Bukhārā in 382/992), invaded the Western Qarākhānid khaqanate. At the same time, Maḥmūd Ghaznavī invaded Mawarānnahr from the south. The ruler of Samarqand and Bukhārā Ilel ‘Alī b. al-Ḥasan (‘Alī Tegīn of the chronicle) hid with his army in a desert. But soon after that, Maḥmūd returned

to Ghazna, having shrewdly decided that it was safer to have Qarākhānids fighting one another. The intervention of Maḥmūd, however, allowed Qadir Khān to conquer Balāsāghūn (Ṭonghā Khān Muḥammad's capital) and eastern Farghāna (with Uzgend) in 416. The Western Qarākhānids retained western Farghāna, with Akhsiket, until 418, but c. 419 lost all of Farghāna and Khojende (Fedorov 2000b, 6). Having lost in 416 Balāsāghūn, Ṭongā Khān Muḥammad went to Sogd. The fals of 416 Sogd<sup>2</sup> cite *Khān Malik al-Mashriq Muḥammad b. Ḥasan Ṭongā Khān* (Kochnev 2004, 273). Thanks to coin 34, we know that he resided in 416 in Kushānī. Having lost Balāsāghūn, Ṭonghā Khān Muḥammad remained the supreme ruler of the Western Qarākhānids. The suzerainty of Ṭongā Khān included in 416–418 his brother Ilek 'Alī b. Ḥasan, his nephew Arslān Tegin Yūsuf b. 'Alī, and other Western Qarākhānids, both in Samarqand-Bukhāran Sogd and in Kesh (southern Sogd, Kashka Daria valley) and in Akhsiket in Farghāna valley (Kochnev 1995: 249–251/652–653, 686, 702; 2004, 274/688a, 691a). Moreover, in addition to the Western Qarākhānids, the ruler of Saghāniān (the Surkhan Daria valley, south of Kesh) cited Nāṣir al-Haqq Khān (i.e., Ṭongā Khān Muḥammad b. al-Ḥasan) as his suzerain (Fedorov 2004, 204–205).

Kochnev (1995, 251/691, 699, 702) mentioned fulūs of 418 Sogd (citing Malik al-Mashriq Qadir Khān and vassal Arslān[?] Tegin), 419 Ishtikhan (citing Nāṣir al-Haq va al-Dīn Malik al-Mashriq va al-Ṣīn), and 419 Samarqand (citing Khān Malik al-Mashriq va al-Ṣīn and vassal Arslān Tegin). Kochnev (2000, 181–182) wrote, “*laqab*” Nāṣir al-Haq and title Malik al-Mashriq had simultaneously two Qarākhānids: Qadir Khān I Yūsuf b. Hārūn and Ṭoghān Khān Muḥammad b. Ḥasan. The question of who cited the coins of 419/1028 Istikhan cannot be solved easily. But the fact that Qadir Khān was not only titled as such, but was the ‘King of the East and Ṣīn’ (he ruled Eastern Turkestan, ‘Lower Ṣīn’) favors him. Malik al-Mashriq va al-Ṣīn, cited on fulūs of 419/1028 Sogd as suzerain of Arslān Tegin was Qadir Khān.” But the fals of 419 Sogd citing Malik al-Mashriq va al-Ṣīn, suzerain of Arslān Tegin, does not actually exist. In Kochnev’s catalogue (1995, 251/702) there is a fals of AH 419 Samarqand (not 419 Sogd), which cites Malik al-Mashriq va al-Ṣīn, suzerain of Arslān Tegin. Moreover, Kochnev (2000, 184) compiled a table of coins where (again!) he did not list a fals of AH 419 Sogd citing Malik al-Mashriq va al-Ṣīn, suzerain of Arslān Tegin. Moreover, there is no fals of AH 419 Samarqand citing Malik al-Mashriq va al-Ṣīn as suzerain of Arslān Tegin. There is an AH 419 Samarqand fals citing only Malik al-Mashriq but not Malik al-Mashriq va al-Ṣīn! What should one believe? Could it be that in 2000 Kochnev corrected his reading and that the AH 419 Samarqand fals actually cited Maliq al-Mashriq

2. “Sogd” was name of the province, just as “Chāch” or “Farghāna.” There was not such town “Sogd.”

but not Maliq al-Mashriq va al-Şin? He also cautiously supposed that Arslān Tegin, vassal of Malik al-Mashriq va al-Şin, was an Eastern Qarākhānid. But in his next article, Kochnev (2002, 87) wrote quite categorically, “on the fulūs of AH 418 Sogd, AH 419 Samarqand and on some fulūs of AH 419 Ishtikhan was cited not ‘Alī but his enemy, Qadir Khān Yūsuf b. Hārūn.” Given this evidence, could Qadir Khān I Yūsuf have possessed Sogd, Ishtikhan, and Samarqand in 418–419?

The fulūs of 419 Sogd citing Malik al-Mashriq va al-Şin, suzerain of Arslān Tegin, and of 419 Samarqand citing Malik al-Mashriq va al-Şin as suzerain of Arslān Tegin do not exist. The coin read by Kochnev as “Ishtikhan, 419” was actually minted in Isbijāb. Isbijāb, اسبيجاب, and اشتبخن, “Ishtikhan” written without diacritical marks, are easy to mistake for one another, especially if the last letters are worn. The Eastern Qarākhānids attacked the Western Qarākhānids and seized Balāsāghūn in 416 and Shāsh in 418 (Kochnev 1995, 249/657, 251/695). Ispīdjāb was between Shāsh and Balāsāghūn; thus it should have been captured by the Eastern Qarākhānids between 416 and 418. So the coin of AH 419 Ispīdjāb citing Nāşir al-Haq va al-Dīn Malik al-Mashriq va al-Şin fits here perfectly. Nāşir al-Haq va al-Dīn Malik al-Mashriq va al-Şin was the usual titulature of Qadir Khān. Such a variant (with va al-Dīn) has not been seen on the coins of Sogd, Samarqand, and Ishtikhan. On the other hand, the authentic coins of AH 419–420 Ishtikhan cite the Western Qarākhānid Arslān İlek (i.e., ‘Alī b. al-Ḥasan) as an independent ruler (Kochnev 1995, 251/700), which means that Qadir Khān never minted coins in Ishtikhan.

As for the coin read by Kochnev as “Sogd, 418,” he most probably misread the mintname. All the more so, since the authentic AH 418 Sogd fulūs (Kochnev 2004, 691a) cite Khān Malik al-Mashriq and his vassal Yūsuf Yaghān (which actually is Toghān, not Yaghān) Tegin (i.e., Toghān Khān Muḥammad b. al-Ḥasan and his nephew Toghān Tegin Yūsuf b. ‘Alī). A dirham of AH 419 Khogend<sup>3</sup> (Fedorov 2000c, 17) cited Nāşir al-Haq Malik al-Mashriq Qadir Khān and Rukn al-Daula Arslān Tegin. On a fals of Khogend, this titulature could be shortened to Malik al-Mashriq Qadir Khān and Arslān Tegin. Khogend (خکند) and Sogd (سغد) are easily mistaken for each other, especially on worn or rusty coins.

Therefore, there are no valid grounds to assert that Qadir Khān minted coins in Samarqandian Sogd.

**Coin 42 (Dakhket, 403).** Kochnev (1995, 303, 306) mentioned two coins of this type. On no. 303, he read the mint name as Benāket; on no. 306, Dakhket. Kochnev (1993, 197–198) wrote, “fulūs of 403 Benāket and Dakhket cite in the reverse field Sanā ad-Daula Khān. The way the title Khān and *laqab* Sanā ad-Daula, belonging to Muḥammad b. ‘Alī, are placed on these coins makes one attribute this

3. Or could it be Khokand?



title to Muḥammad. One must not exclude the possibility that because of changes in the dynastical situation after the death of Naṣr b. 'Alī ... Muḥammad laid claim to the title Khān, but soon renounced his claim. The utter scarcity of the coins with the legend Sana ad-Daula Khān (3 pieces) ... makes one admit the possibility that this legend was the result of a mistake. Although an identical mistake on the coins of two different mints seems impossible one should keep in mind that these fulūs are quite identical and differ only in mint names i.e., that they derived from one and the same prototype, where the mistake was made." But the identity of the coins is evidence that they were minted at the same mint and that one of the readings by Kochnev is mistaken. In order to support this reading (or rather, misreading), Kochnev had to invent some "common prototype with a mistake" from which the coins of two different towns (Benāket and Dakhket) derived. There is a more plausible explanation. When a mint was closed (for economic or political reasons), the dies were brought to another mint. Davidovich (1960, 257) wrote that some coins of 355–359 Farghāna were minted by dies brought from the closed mints of Naṣrābād and Qubā (they were mules with one side minted by an obsolete die brought either from Naṣrābād or Qubā). Coin 42 is a mule; one of its dies could have been brought from the closed mint to the functioning mint. It would explain why the same mistake was on coins of two different towns. But the die with the mistakenly placed titulature lacked a mintname, so that there is nothing to indicate that it was brought from another town. We deem there was not any mistake. It is not the word "Khān"; it is the name "Jān," as on coin 23 (Ilāq, AH 400). It could be the same subvassal who appeared in AH 400 on the fals of Ilāq.

In fact, there is an authentic coin of AH 403 Dakhket (Kochnev 1995, 307) of a quite different type. It mentions Sanā al-Daula Tegīn (i.e., Muḥammad b. 'Alī), and mentions no suzerain.

Coin 47 (Kermine, 427). We read the legend as "Faithful Gray[haired] Tūn." *Īnānch* in Turkic = loyal, staunch, faithful. *Kūk* = blue, green, gray. *Tūn* = first, firstling, firstborn. Kochnev (1995, 250/677) mentioned in his catalogue a similar (or maybe the same) coin of Kermine, on which he read the date as "417," but on the coin described above it is quite distinctly "427." Kochnev (2000, 184) read the name *Īnānj Kokūz*, having ignored the letter (the short prong) between the second 𐰇 and the second 𐰆, but did not explain this name. Actually, the name is *اينانچ كوكنون* *Īnānj Kūktūn* (faithful gray[haired] Tūn). In early medieval Chach (the Tashkent oasis), there was a Turk ruler named Tūn, and the capital of medieval (ninth and tenth centuries) Ilāq, Tūnket, (Tūn+ket, the "Town of Tūn") was either founded by this Tūn or named after him (Fedorov 2005, 8).

## REFERENCES

- Baihaqi. 1969. *Istoriia Mas'uda (1030–1041), perevod . . . A. K. Arends*. Moskva: Nauka.
- Bartold, V. V. 1963. Turkestan v epokhu mongol'skogo nashestviia. In *Sochineniia*, vol. 1. Moscow: Nauka.
- . 1963a. Ocherk istorii Semirech'ia. In *Sochineniia*, vol. 2, kn. 1, 23–106. Moskva: Nauka.
- Belenitskii, A. M., I. B. Bentovich, and O. G. Bol'shakov. 1973. *Srednevekovyi gorod Srednei Azii*. Leningrad: Nauka.
- Biruni. 1957. Pamiatniki minuvshikh pokolenii, perevod . . . M. Sal'e. In *Izbrannye proizvedeniia*, vol. 1. Tashkent: Fan.
- Buriakov, Iu., M. Kasymov, and O. Rostovtsev. 1973. *Arkheologicheskie pamiatniki Tashkentskoi oblasti*. Tashkent: Fan.
- Davidovich, E. A. 1960. Samanidskie monety Kuby. *Sovetskaia archeologiya* 2: 254–257.
- Fedorov, M. N. 1990. *Karakhanidskaia numizmatika kak istochnik po istorii Srednei Azii kontsa X-nachala XIII vv. Avtoreferat dissertatsii na soiskanie uchenoi stepeni doctora istoricheskikh nauk*. Novosibirsk.
- . 2000. Fargāna. *Supplement to Oriental Numismatic Society Newsletter* 165: 10–12.
- . 2000a. The towns of Sogd in the first half of the eleventh century AD. *Supplement to Oriental Numismatic Society Newsletter* 165: 30–33.
- . 2000b. Akhsiket and Kasan. *Supplement to Oriental Numismatic Society Newsletter* 165: 5–10.
- . 2000c. Khojende. *Supplement to Oriental Numismatic Society Newsletter* 165: 15–19.
- . 2001. The genealogy of the Qarākhānids. *Supplement to Oriental Numismatic Society Newsletter* 168: 16–33.
- . 2001a. The political, socioeconomic, and cultural interaction of the Iranian and Turkic peoples under the Qarākhānid khaganate. *Supplement to Oriental Numismatic Society Newsletter* 168: 2–16.
- . 2001b. Qarākhānid coins as a source for the history of Ilāq. *Oriental Numismatic Society Newsletter* 169: 10–18.
- . 2002. Qarākhānid coins as a source for the history of Shash. *Oriental Numismatic Society Newsletter* 172: 7–12.
- . 2004. Qarakhanid coins as a source for history of Saghāniiān. *Numismatic Chronicle* 164: 201–208.

- . 2004–2005. New data on monetary circulation in medieval Andūkān and Shelji: Coins from the Andizhanskoe and Kirovskoe Vodokhranilishche. *American Journal of Numismatics* 16–17: 113–144.
- . 2005. More on the money circulation in early medieval Chach. *Oriental Numismatic Society Newsletter* 183: 7–9.
- . 2007. On the internecine war of 1013–1017 in the Qarākhānid khakanate (Qarākhānid coins as historical sources). *Central Asiatic Journal* 51, no. 1: 1–21.
- Kalinin, V. A. 2000. The Sāmānid coinage of Khojend. *Oriental Numismatic Society Newsletter* 164: 15–16.
- Kochnev, B. 1979. Zametki po srednevekovoi numizmatike Srednei Azii. Ch. 2 (Karakhanidy). *Istoriia material'noi kul'tury Uzbekistana* 15: 120–138.
- . 1993. *Karakhanidskie monety: istochnikovedcheskoe i istoricheskoe issledovanie, Dissertatsiia na soiskanie uchenoi stepeni doktora istoricheskikh nauk*. Samarqand.
- . 1995. Svod nadpisei na karakhanidskikh monetakh: antroponimy i titulatura. 1. *Vostochnoe Istoricheskoe Istochnikovedenie i Spetsial'nye Istoricheskie Distsipliny* 4: 201–279.
- . 2000. Maverannahr nakanune sozdaniia zapadnogo karakhanidskogo kaganata (v svete numizmatiki). *Istoriia material'noi kul'tury Uzbekistana* 31: 178–203.
- . 2002. Novye nakhodki musul'manskikh monet. In *Arkheologicheskie issledovaniia v Uzbekistane v 2001 gody*, 86–91.
- . 2004. Svod nadpisei na karakhanidskikh monetakh: antroponimy i titulatura. 3. In *Vostochnoe Istoricheskoe Istochnikovedenie i Spetsial'nye Istoricheskie Distsipliny* 6, 261–291.
- Materialy po istorii kirgizov i Kirgizii 1. 1983. Izd. Nauka.
- Mayer, T. 1998. *Sylloge Numorum Arabicorum Tübingen. Nord- und Ostzentralasien, XV b Mittelasien II*. Tübingen-Berlin: Ernst Wasmuth Verlag.

## An Unpublished AH 607 Uzjend Dirham

PLATE 117

RALPH A. CANNITO\* AND MICHAEL N. FEDOROV\*\*

A new, heretofore unknown type of the AH 607 Uzjend dirham is presented, which differs from the one formerly published example in that the mint name is placed on both sides. It is possible that the mint name was engraved for the second time mistakenly, instead of part of the title, which is missing. This new type helps to shed light on the workings of the Uzjend mint.

A large fiduciary copper dirham washed with silver (traces of which are visible), an unpublished type of the AH 607 Uzjend dirhams, is here presented and discussed. Chronicles written by the Qarākhānid khaqanate have not survived, while information on the Qarākhānids in other chronicles is scarce, obscure, and sometimes contradictory. For this reason, Qarākhānid coins are important and sometimes the only source of information about this khaqanate. Each new unpublished type of Qarākhānid coinage is a welcome find.

Fiduciary silver-washed dirhams appeared in the Qarākhānid khaqanate as a result of the so-called silver crisis. In the eighth through tenth centuries, there was a massive outflow of silver coins from Central Asia to Eastern Europe. Starting in the tenth century, this outflow was not compensated for by silver obtained in Central Asia. In some mines, deposits of silver were depleted. Around others, the forests were cut down so that, without a source of charcoal, silver could not be smelted from the ore. By the beginning of the eleventh century, there was a shortage of silver in Central Asia. The available supply of silver was insufficient for local

\* 83 Mine Hill Road, Washington, NJ 07882-4147.

\*\* Ida-Dehmel-Ring 64, D-68309 Mannheim, Germany.

market needs for high-standard silver coins. This resulted in a debasement of coins and finally in the disappearance of even low-standard billon coins (Davidovich 1960, 102–110, 115–117; Fedorov 2001, 5–9). These were supplanted by fiduciary silver-washed copper dirhams, which were essentially metallic banknotes. They were accepted only within the state minting them and, if the amount of such coins surpassed market needs, they spurred inflation. Simultaneously with the appearance of fiduciary dirhams, the output of gold dinars increased to meet the need for coins that were widely acceptable and resistant to inflation. However, since the dinar was a denomination of high value (it could buy one or two sheep) and inconvenient in everyday trade, it was often cut into pieces and circulated in fragments. Hoards of Qarākhānid gold coins usually contain both whole dinars and fragments (Davidovich 1960, 99–100). In addition, low standard dinars appeared, which were more convenient for everyday trade (Davidovich 1960, 101). The silver-washed dirhams contain about 5 to 7 percent silver. They are copper coins covered with silver and mercury amalgam and placed in a forge. Once the mercury evaporated from the coin's surface, a thin coating of silver remained (Fedorov 2002, 3).

In 559/1163, Arslān Khān Ibrāhīm b. Ḥusain started to mint in Uzjend fiduciary copper dirhams washed with silver (Davidovich 1979, 195). His monetary initiative was prompted by an analogous reform by Qlych Ṭafghāch Khān Mas'ūd in Samarqand (Fedorov 2002, 7). Arslān Khān's successor Qadir Khān (574–607/1178–1211) continued to mint fiduciary dirhams. When their amount surpassed the needs of trade, inflation resulted. Qadir Khān several times tried to remedy this situation by increasing the weight and size of his dirhams. Having started in 574 with a weight of about 4 g, by c. 607 fiduciary dirhams of Uzjend weighed 13 g—three times heavier. The reforms in Uzjend influenced the monetary policies of neighboring principalities. Whenever silver-washed dirhams grew heavier and bigger in one principality, the others followed suit (Davidovich 1961, 186–188, 194–196; Fedorov 2002, 9).

Uzgend (modern Uzgen in Kyrgyzstan), the easternmost town of Fergana, is situated at the bank of the Qara Darya, the southern tributary of the Syr Darya, dividing the valley into Northern and Southern Fergana (Belenitskii, Bentovich, and Bol'shakov 1973, 202–204). In the time of the first Qarākhānids (before the death of the Sāmānid state conqueror, Ilek Naṣr b. 'Alī, in 403/1012–1013) Uzgend was capital of Mawarānnahr and later of Fergana (Bartold 1963, 213). The victorious campaign of 389/999, which ended in the conquest of Bukhārā and the Sāmānid state, was launched by Ilek Naṣr from Uzgend, his capital. Here he deported and imprisoned the last Sāmānid amīr, 'Abd al-Malik II b. Nūh II, together with his relations (Bartold 1963, 327–329). The latest Sāmānid coin of Uzgend was minted in 380/990–991 (Kochnev 1988, 193); the earliest Qarākhānid coin (Kochnev 1995,

203) was minted in Uzgend in 381/991–992 by Arslān Tegīn b. Ulugh Tegīn, citing Shihāb al-Daula Turk Khāqān as suzerain. The *laqab* (title) Shihāb al-Daula belonged to Boghrā Khān Hārūn, ruler of Balāsāghūn, who captured Bukhārā in 382/992 but died in the same year. Bīrūnī (1957/150) wrote: “Boghrā Khān, when he took the field in the year three hundred eighty two, named himself Shihāb al-Daula.”

The name of the town was written on the coins in three different ways. The earliest coin of Uzgend was minted in 312/924–925, in the name of Sāmānid *āmīr* Naṣr II b. Aḥmad (301–331/914–942) and his vassal Malik. On this coin, the mint name is written اوزقند (Uzqend), with the letter ق (Fedorov 2004/5, 115). On the later Sāmānid coins and Qarākhānid coins of the eleventh century, it was written اوزکند (Uzgend), with letter ک. And from about the middle of twelfth century, it was written اوزجند (Uzjend), with letter ج.

The new coin:

Uzjend, 607/1210–11. W.- 13.04 g. D.- 45 mm (Pl. 117, no. 1).

*Obv.* Within double-line circle:

[sic] الناصر / لا اله الا / الله وحده / لا شريك له / الدين.

*Circular legend:*

امر به السلطان العالم في بلدة الاوزجند جلال الدنيا والدين الخ سلطان قدر خان

*Rev.* Within double-line circle:

جلال الدنيا و / الدين لغ سلطا / ن قدر خاقان / خان.

On the reverse above the inscription is some illegible word. The last letter (or letters) م or مر or مز or من is (are) preceded by two prongs. A prong without diacritical points (which is almost always the case with coins) could denote many different possibilities: ب or ت or ث or ذ or ن or ئ. When we have two in a row, the number of different combinations of the letters could be doubled. To add to the confusion, short vowels were usually not written. Under the central legend was the word “Khān”; thus this illegible word should be a honorary epithet applied to this word. A. Markov (1896, 292, 608–610) read the first letter as ف or ق, the second as ج and the third as ص or ض. But since all three letters are of the same height, the second letter cannot be ج, which (like *alif*) is taller than other letters. And the last letter looks more like م, with a sinuous tail lifted up, or مر or مز or من.

*Circular legend:*

ضرب هذه الدرهم في بلدة الاوزجند في شهور سنة سبع و ستمائة

The written form of the numbers 7 (سبع) and 9 (تسع) without diacritical points are easy to mistake for one another. But the date 607 is certain, since in 609 Uzjend

minted coins in the name of the last Qarākhānid ruler of Uzjend Kūch Arslān Khāqān Maḥmūd b. Aḥmad citing Muḥammad Khwarezmshāh as suzerain (Pl. 117, no. 2) (Davidovich 1957, 103).

Coins of AH 607 Uzjend were first published in 1896 (Markov 1896, 292, 608–609) and since then have been used as a source of historical information by other scholars (Davidovich 1957, 104–105; Kochnev 1983, 86–88; Fedorov 1984, 116; 2004, 14). But they differ from the coin published here in their obverse circular legend: السلطان العالم العادل الاعظم جلال الدنيا و الدين الغ سلطان قدر خاقان. This legend contains only the ruler's titulature (the mint name being on the reverse). The obverse legend on the discussed coin stated that this dirham was minted in the town of Uzjend by the order of Sulṭān al-ʿĀlim Jalāl al-Dunya wa al-Dīn Ulugh Sulṭān Qadīr Khān (the mint name being repeated on the reverse for the second time).

In 1984, one of the present authors (Fedorov 1984, 17), proceeding from the fact that the successor of Qadīr Khān in Uzjend was Kūch Arslān Khāqān Maḥmūd b. Aḥmad, inferred that the name of Qadīr Khān was Aḥmad. Kochnev (1990, 210) substantiated this inference. He wrote that the panegyrist of the last Qarākhānids, Diyā al-Dīn Khojendī in one of his poems mentioned Sulṭān Jalāl al-Dunya Aḥmad, and that from all the known Qarākhānid rulers of Mawarannahr in the second half of the twelfth and beginning of the thirteenth centuries, the title of Sulṭān in combination with the *laqab* Jalāl al-Dunya wa al-Dīn belonged only to Qadīr Khān.

Davidovich (1961, 188) published an AH 594 Uzjend dirham citing Qadīr Khāqān b. Sulṭān (Pl. 117, no. 3). In 594, the only Qarākhānid with the title Sulṭān was the ruler of Samarqand Ibrāhīm b. Ḥusain. He had ruled Uzjend from 559, but in 574 he captured Samarqand and became the nominal head of the Western Qarākhānids, having left Uzjend to Qadīr Khān. Thus the Muslim name of Qadīr Khān was Aḥmad b. Ibrāhīm. Mayer (1998, 27) accepts this identification as firmly established fact and called the Qarākhānid who ruled Uzjend in AH 574–607 Qadīr Khān Aḥmad b. Ibrāhīm.

However, there is something strange about the obverse circular legend of the silver-washed dirham published by the authors. It is not out of the question that the words بلدة الاوزجند were engraved by mistake and instead should be العادل الاعظم, as on the coins first published in 1896. One way or the other, we have here a heretofore unknown type of the AH 607 Uzjend silver-washed fiduciary dirham, which gives us more information regarding the working of the Uzjend mint under Qadīr Khān.

### KEY TO PLATE 117

1. Dirham of AH 607 Uzjend, private collection.
2. Dirham of AH 609 Uzjend. Graphic description by E. A. Davidovich.
3. Dirham of AH 594 Uzjend. Graphic description by E. A. Davidovich.

## REFERENCES

- Bartold, V. V. 1963. Turkestan v epokhu mongol'skogo nashestviia. *Sochineniia* 1. Moscow: Izd. Nauka.
- Belenitskii, A. M., I. B. Bentovich, and O. G. Bol'shakov. *Srednevekovyi gorod Srednei Azii*. Moscow: Izd. Nauka.
- Biruni. 1957. Pamiatniki minuvshikh pokolenii, perevod ... M. Sal'e. *Izbrannye proizvedeniia* 1. Tashkent: Fan.
- Davidovich, E. A. 1957. Numizmaticheskie materialy dlia khronologii i genealogii sredneaziatskikh Karakhanidov. In *Numizmaticheskii sbornik*, 91–119. Moscow: Izd. Nauka.
- . 1960. Iz oblasti denezhnogo obrashcheniia v Srednei Azii XI–XII vv. *Numizmatika i epigrafika* 2: 92–117.
- . 1961. Kanibadamskii klad karakhanidskikh monet. *Sovetskaia arkheologiia* 1: 187–200.
- . 1979. *Klady drevnikh i srednevekovykh monet Tadzhikistana*. Moscow: Izd. Nauka.
- Fedorov, M. 1984. Politicheskaiia istoriia Karakhanidov v XII–nachale XIII v. *Numizmatika i epigrafika* 14: 100–125.
- . 2001. On the “silver crisis” in Central Asia, Caucasus, and adjacent regions of the Middle East. *Oriental Numismatic Society Newsletter* 167: 5–9.
- . 2002. On the money circulation in the Qarākāhanid Khaqanate. *Oriental Numismatic Society Newsletter* 173: 3–11.
- . 2004. Uzgend under the Qarākāhanids (according to the data provided by Qarākāhanid numismatics). *Oriental Numismatic Society Newsletter* 181: 9–16.
- . 2004/5. New data on monetary circulation in mediaeval Andukān and Shelji: Coins from the Andizhanskoe and Kirovskoe Vodokhranilishche. *American Journal of Numismatics* 16/17: 113–144.
- Kochnev, B. D. 1983. Novye numizmaticheskie dannye po istorii Karakhanidov vtoroi poloviny XII—nachala XIII v. In *Kirgiziia pri Karakhanidakh*, 75–102. Frunze: Izd. Ilim.
- . 1988. Zametki po srednevekovoi numizmatike Srednei Azii. *Istoriia material'noi kul'tury Uzbekistana* 22: 191–205.
- . 1990. Zametki po srednevekovoi numizmatike Srednei Azii. *Istoriia material'noi kul'tury Uzbekistana* 24: 207–214.
- Markov, A. K. 1896. *Inventarnyi katalog Musul'manskikh monet Imperatorskogo Ermitazha*. Saint Petersburg.
- Mayer, T. 1998. *Sylloge Numorum Arabicorum Tübingen. Nord- und Ostzentral-asien, XV b Mittelasien II*. Tübingen-Berlin: Ernst Wasmuth Verlag.





## Washington Counterstamps—the Lafayette Connection

JOHN M. KLEEBERG\*

Two Washington counterstamps (Baker 198 and 1053) are linked to Lafayette's tour of the United States in 1824–25. Baker 198, traditionally attributed to C. C. Wright, probably was issued by Joseph Lewis; Baker 1053 may have been issued by Robert Lovett, Sr. There are also two fantasy Washington counterstamps, one made by the forger of a group of buttons known as the "Ruth Find," the other by Paul Gerow Franklin, Sr., of Massapequa, Long Island. The article includes transcriptions of the newspaper advertisements of the period.

The two most important Washington counterstamps were made in connection with Lafayette's tour of the United States in 1824–25. The dies were not made principally for the purpose of counterstamping coins, but rather to make small medalets that people could wear at the balls and receptions for Lafayette. People who wanted a souvenir then had coins counterstamped with the medalet dies. The production, distribution and advertisement of the Lafayette medalets explain who made the Washington counterstamps.

### LAFAYETTE'S TOUR OF THE UNITED STATES, 1824–1825, AND THE MARKET IN SOUVENIRS

In the United States Lafayette is greatly admired. Lafayette made a major contribution to the victory at Yorktown in 1781, and to winning the American Revolution (Bernier 1983). In addition to his undoubted achievements, Lafayette was a very likeable individual. He remained gracious and good-humored throughout his tir-

\*jmkleeberg@yahoo.com

ing United States tour. He tried to greet all who came to see him. He traveled to every one of the then twenty-four states—from Missouri to Maine (Idzerda, Loveland and Miller 1989, 72). So one important reason for the mass enthusiasm for Lafayette when he toured the United States in 1824 is that he deserved it.

Moreover, the United States was also enjoying an economic boom. The independence of the Latin American republics in the early 1820s led to many bond issues in London. This would culminate in the British commercial crisis of 1825 (Wirth 1890, 126–52; Kynaston 1994, 65–72). Much of this investment redounded to the benefit of the United States, because it was close to these new markets. The United States was building many canals: the Erie Canal opened in 1825. New York State experienced a boom in new banks. From 1815 to 1825, the amount of capital invested in banks in New York State increased from \$18 million to \$25 million (Flagg 1868, 3–4, 69). When Lafayette arrived in August 1824, people were feeling good. They were wealthy. They had disposable income. They could spend money on souvenirs of Lafayette's tour.

United States entrepreneurs turned out Lafayette souvenirs with extraordinary rapidity and in great profusion. Lafayette arrived in New York on August 15, 1824. He went off on a tour to Boston, and he came back to New York for an elaborate fête at Castle Garden held on September 14, 1824 (rescheduled from September 10, 1824). New York merchants had souvenirs ready for sale by the first week of September. Joseph Lewis first advertised his Lafayette medalets for sale on September 3 (see advertisement 1 in the Appendix below). There were gloves printed with an engraving of Lafayette. There were hats with the same Lafayette engraving. There were cloth badges. By October you could buy a Lafayette piano; and for Christmas you could buy a Lafayette cake (Brandon 1950, 1:203–5; Idzerda, Loveland and Miller 1989, 116, 119).

## THE WASHINGTON AND LAFAYETTE COUNTERSTAMP OF 1824

### *The Traditional Attribution of this Counterstamp to C. C. Wright is Incorrect*

The Washington and Lafayette counterstamp of 1824 (Baker 198) traditionally has been ascribed to Charles Cushing Wright. This attribution is incorrect. To begin with, the punches are distinctly different from those used on C. C. Wright's Erie Canal medal of 1826. More importantly, in October 1824 Scoville of Waterbury advertised Lafayette buttons, and stated that they had been engraved by C. C. Wright (see advertisement 11 in the Appendix). These buttons have C. C. Wright's signature on the reverse. The image on the buttons is very different from the counterstamp: the buttons have an unflattering portrait of an old man, taken from life. The Washington/Lafayette counterstamp shows a younger, idealized Lafayette. The Scoville button shows an old Lafayette, wearing a frumpy wig, with a double chin. The button is closer to how Lafayette really appeared in 1824, although Wright

went overboard in his realism; he made Lafayette more ugly than he was. Given the distinct difference in imagery on the C. C. Wright buttons from the counterstamp, C. C. Wright was not the diesinker of the counterstamp. Furthermore, C. C. Wright had the custom of signing his work. The Scoville buttons are signed by C. C. Wright; the Washington/Lafayette counterstamp is unsigned (Davis 1951).

*Three Producers of Lafayette Medalets: Lewis, Lovett, and Stout*

Given that C. C. Wright did not make the Washington/Lafayette counterstamp, who did? Contemporary newspapers suggest an answer.

New York city newspapers around the period of the Castle Garden ball carry advertisements from three engravers selling medalets of Lafayette: Joseph Lewis; Robert Lovett, Sr.; and James D. Stout. (All the advertisements are transcribed in the Appendix below; these are advertisements 1–6.) In late September, when Lafayette traveled on to Philadelphia, Joseph Lewis shipped his medalets to agents in Philadelphia who sold them there and ran advertisements in the Philadelphia newspapers (advertisements 7–10 in the Appendix below). By reading through all the advertisements, it becomes clear that Lewis's medalet depicted Washington on one side and Lafayette on the other—i.e., exactly like our counterstamp.

Moreover, it was Joseph Lewis's medalet that was the most successful. Lovett advertised in the *New-York Evening Post* once, Stout twice, but Lewis advertised his medalet at least eight times. The Castle Garden ball committee adopted his medalet as the official one. Lewis's medalet was specifically described in the papers. By late September, over 2,000 of the Lewis medalets had been sold in New York. It was also sold in Philadelphia.

The description of the Lewis medalets in the newspapers was as follows. The *New York Evening Post* remarked on September 4 that "A medallion likeness in gold or silver is to be had at Mr. Lewis's the engraver, No. 3 Wall Street, equally proper." In his account of the Castle Garden ball, the *Post* reporter wrote:

White and black dresses over satin were mostly worn, with a profusion of steel ornaments and neck chains of gold and silver, suspended to which were beautiful gold and silver badge medals, bearing a correct likeness of La Fayette manufactured for the occasion. The gentlemen had suspended from the button hold of the coats a similar likeness, and with the ladies, had the same stamped on their gloves.

This account is helpful in confirming that Lewis was the manufacturer of the Washington/Lafayette medalets and counterstamps, since the reporter writes that the medalets were *suspended*. This means that some of the medalets must have been holed. Several holed Washington/Lafayette medalets do indeed survive (see, e.g., Stack's 2003, lot 1432).



Figure 1 (ANS 1944.56.1)



Figure 2 (ANS 1993.141.23)

Lewis prepared his dies in two weeks: the medalets were ready by September 3, and Lafayette had only arrived on August 15. The haste with which the dies were prepared is reflected in Lafayette's generic appearance. We only know it is Lafayette because his name is written around it. If there were no name, we might as easily say that it depicted the Duke of Wellington—even though being confused with Wellington would have mortified Lafayette (Fig. 1).

#### A SECOND WASHINGTON COUNTERSTAMP OF 1824: THE WORK OF ROBERT LOVETT, SR.?

There is another, but less well known, Washington counterstamp (Baker 1053) that has been attributed to Lafayette's 1824 visit (Fig. 2). It is much smaller than the Washington/Lafayette counterstamp by Joseph Lewis. Its attribution to 1824 is almost certainly correct, for the specimen in the Garrett sale had a pedigree back to Joseph Mickley's collection, so it antedates 1867. The three examples traced have the following host coins, all of which are consistent with what was in circulation in New York City at the time of Lafayette's visit:

- 1) Garrett: 1818 English shilling (Garrett, lot 1906).
- 2) American Numismatic Society: 1794 2 reales, Santiago, assayers DA (ANS 1993.141.23).
- 3) Ford: 1789 pistareen, Madrid, assayers MF (Stack's 2004, lot 202).

The skill and care with which this counterstamp is made suggest that it is the work of Robert Lovett, Sr. But as noted above, there was another engraver who sold medalets (James D. Stout); and there may be other producers of medalets and counterstamps, as yet undiscovered, who may have been responsible. The way to solve this problem would be to link it up to a corresponding Lafayette medalet. A distinctive feature of this Washington counterstamp is a circular border surrounding the inscription. Q. David Bowers very generously lent the author his Lafayette collection for study, and there were a number of items in it that seemed to be likely candidates and that would help narrow down further the maker of this counterstamp.



Figure 3

## TWO MODERN FANTASY WASHINGTON COUNTERSTAMPS

### *The “Ruth Find” Button and its Use as a Fantasy Counterstamp*

In 1949, a hitherto unknown Washington inaugural button was discovered and published by the button cataloger Alphaeus H. Albert among the buttons owned by a New Jersey collector. In 1950, a discovery of buttons of the same type was announced by the button collector Warren P. Ruth (the “Ruth Find”). The button cataloger Alphaeus H. Albert initially published the new variety as genuine, but upon further examination discovered that one button of the new variety was overstruck on a piece of metal dating from after 1870. Albert published his opinion that the “Ruth Find” was not of eighteenth century origin in 1966 and effectively condemned the pieces as modern creations in the 1976 edition of his button reference.

The Ruth collection was sold to the Rochester coin dealer William F. Sunday, and from him to the button collector J. Harold Cobb. The Cobb collection of Washington buttons was auctioned by Stack’s in January 2003, with the controversial pieces properly identified. An examination of the piece provenanced to the “Ruth Find” confirms Albert’s conclusion: it has unevenly punched stars and crudely made denticles, and differs markedly from the genuine specimens in Cobb’s collection (Stack’s 2003, lot 1348, and text preceding lot 1326).

A number of the pieces in the “Ruth Find” were struck on coin undertypes, including British, United States, and Vermont coppers (Stack’s 2003, text preceding lot 1326). The dies used to create the fake Washington buttons in the “Ruth Find” were also used to create fantasy Washington counterstamps. These counterstamps have the inscription “LONG LIVE THE PRESIDENT\*” in a ring, and inside the ring a script GW not in ligature. This design copies that of genuine Washington inaugural buttons, except that on the genuine pieces the GW is in ligature. The American Numismatic Society has an example of this counterstamp in its collection: the host coin is a very worn halfpenny, probably a contemporary counterfeit. The counterstamp shows little wear; the GW in particular is boldly struck. Careful examination of this piece and the piece plated in the Stack’s sale leads to the conclusion that the “Ruth Find” Washington inaugural button and the counterstamp are from the same dies (Fig. 3). The ANS piece was donated in February 1957 by Damon G.

Douglas, the noted researcher in coinages of the United States Confederation period. The "Ruth Find" counterstamp was first published in the 1965 Krause reprint of Baker on Washington medals. The counterstamp there appears on an 8 reales of México, dated 1794, assayers FM.

*Paul Gerow Franklin, Sr.'s Fantasy Washington Bust Counterstamp*

Paul Gerow Franklin, Sr., of Massapequa Park, Long Island, created a counterstamp with an elaborate bust of Washington wearing a uniform and a wig, and the inscription GEORGE WASHINGTON around. This was first published in the 1965 Krause reprint of Baker, and was already described there as "probably not of contemporary issue." The host coin there was an 8 escudos of Bogotá, dated 1790, assayers JJ. In the Stack's sale of the John J. Ford, Jr., Collection in May 2004, it was stated that Paul Gerow Franklin, Sr., made the counterstamp in January 1962 and struck three examples, giving one to John J. Ford, Jr., one to Robert Bashlow, and retaining the third for his own collection. The Ford specimen's host coin was a Boulton cartwheel twopence of 1797 (Stack's 2004, lot 203).

### CONCLUSION

Other possible Washington counterstamps exist—small initials "GW" that are thought to refer to him. These must remain for further research. This article has attributed four Washington counterstamps:

- (1) A genuine Washington/Lafayette counterstamp of 1824, almost certainly the work of Joseph Lewis;
- (2) a genuine small size Washington counterstamp, almost certainly from 1824, possibly the work of Robert Lovett, Sr.;
- (3) a fantasy Washington counterstamp of 1949, the creation of the forger of the "Ruth Find" pieces;
- (4) a fantasy Washington counterstamp of January 1962, the creation of Paul Gerow Franklin, Sr.

### APPENDIX: ADVERTISEMENTS OF LAFAYETTE MEDALETTS AND BUTTONS

#### 1.

#### *TO THE BEAU MONDE*

THE subscriber offers to his patrons his full selection of superior fancy articles and works of art, among which are

Exquisite Miniature Likenesses in Medallion of Gen. *La Fayette*, in fine gold and silver, to be worn at the Ball on the 10<sup>th</sup> instant.

100,000 visiting and address cards, of a superior quality and new patterns.

The subscriber's superior card cases to match the cards.

Rogers' extra finished pen, pocket and sportsmen's knives.

Ladies' needle finding work scissors.

Gold and silver pencil cases.

LEWIS, Engraver & Artist in general,

No. 3 Wall street, near Broadway, and nearly opposite the church.

Visiting and Address Cards, Coats of Arms, Crests, &c. engraved and printed in a superior style, at the shortest notice, and on the most reasonable terms.

SOURCE: *New-York Evening Post*, September 3, 1824, p. [3], col. [2]. This advertisement was repeated at least once.

2.

### Lafayette Medals of Gold and Silver

THE Subscriber offers for sale at No. 8 Wall Street, near Broad street, and next door to the church, Miniature medals in medallion of this illustrious personage, whose name is in full round the heads, which are of gold one side, and silver on the other. As the subscriber feels confident of this being the best article of the kind yet offered to the public, he respectfully solicits them to call and judge for themselves. As they have been made expressly for the Castle Garden Ball, which is to take place on the 10th instant, they are particularly recommended for the badge jewel.

J. D. STOUT

Engraver in general.

SOURCE: *New-York Evening Post*, September 9, 1824, p. [1], col. [1]. This advertisement was repeated at least once more.

3.

### Lafayette Medals

AN Excellent likeness of Gen. La Fayette in gold and silver, intended to be worn at the Grand Ball on the 10<sup>th</sup> inst. for sale by the subscriber, the only good likeness yet executed in medallion.

ROBERT LOVETT,

249 Broadway, corner of Murray st.

Stone & metal seal engraving executed at a short notice, and in a style, it is believed, that will be satisfactory.

SOURCE: *New-York Evening Post*, September 9, 1824, p. [1], col. [1].



4.

## Ball Ornaments

THE Subscriber has a few very splendid Neck Chains; also, Silver do., suitable for the ball, just received from Paris. Also fine Gold & Silver Badge Medals, adopted by the Committee, and recommended to be generally worn on that occasion, the best proof of the superiority of the likeness.

LEWIS,  
Engraver and Artist in general.

Store No. 3 Wall Street, near Broadway, distinguished from any other, by his late improved Patent Door Plate projecting from the door.

For the convenience of ladies and gentlemen, who may not be supplied with the above badge, a quantity ready attached to chains and ribbons is deposited at the bar with the proprietors of Castle Garden.

SOURCE: *New-York Evening Post*, September 14, 1824, p. [2], col. [6]. This advertisement was repeated at least four times more.

5.

MEDALLIONS suitable to be worn at the Masonic Dinner, to be given to Gen. La Fayette on Monday next, can be procured at Br[other] LEWIS' No. 3 Wall st.

SOURCE: *New-York Evening Post*, September 18, 1824, p. [2], col. [6].

6.

## La fayette Medals

THE subscriber offers for sale the above article, warranted of fine gold and silver, being the best likeness exhibited of the General.

A liberal discount to those who buy to sell.

A number is prepared for ladies, attached to silver and steel chains, or balls, &c., being the most appropriate ornament.

LEWIS  
Engraver and Artist in General.

Store No. 3 Wall st. near Broadway, distinguished from any other by his late improved Patent Door Plate projecting from the door.

SOURCE: *New-York Evening Post*, September 22, 1824, p. [2], col. [6].

7.

## La fayette

## Gold and Silver Medals

Just received from New York, a large supply of the above Medals, of the most approved pattern, and of the same as was worn at the Grand Fete at Castle Garden in that city, upwards of 2000 of which were sold in ten days. For sale by

THOMAS S. ANNERS

No. 141, Chestnut street, opposite the  
Philadelphia Bank.

SOURCE: *Philadelphia National Gazette and Literary Register*, September 20, 1824, p. [3], col. [1]. The same advertisement also ran in the issues of September 21-24, 1824.

8.

## Fayette Badges, Medals, Sashes and Gloves

ALL of the best quality, and the same kind that was used at the Grand Fete at *Castle Garden, New York*. May be had at No. 89, South Second street, directly opposite the Pennsylvania Bank, if applied for immediately, as the proprietor intends leaving this city for the South on Tuesday next.

N.B. The medal is an approved likeness of the Nation's Guest, and was warranted of fine gold and silver and was adopted by the Managers of the said Ball on account of the likeness being the best extant.

SOURCE: *Philadelphia National Gazette and Literary Register*, September 25, 1824, p. [2], col. [6].

9.

## LEWIS'S

## New York La Fayette Medals

The above medals are such as was adopted and worn at the Grand Fete at Castle Garden in New York, by the ladies and gentlemen of that city; they being considered as one of the neatest and most appropriate compliments to him.

For sale by *Thos. S. Anners*, No. 141, Chestnut street; *Mrs. E. B. Callendar*, Fourth street, one door above Walnut street; *Miss Papegay*, Walnut street, one door

below Fifth street; and *Charles Fletcher*, North-East corner of Third and Chestnut street.

Also, Silver-plated CHAINS to suspend the above.

SOURCE: *Philadelphia National Gazette and Literary Register*, September 27, 1824, p. [5], col. [4]. The same advertisement also ran in the issues of October 1-2, 1824.

IO.

Lafayette Medals of Gold and Silver

HAVING on them impressions of *Washington* and *La Fayette*, such as have been recommended to be worn at the approaching Grand Ball.

Just received and for sale by

ASH & MASON,  
No. 139, Chestnut street.

SOURCE: *Philadelphia National Gazette and Literary Register*, September 30, 1824, p. [1], col. [3]. The same advertisement also ran in the issue of September 29, 1824.

II.

Lafayette Buttons

A New and Elegant Article

CAMPFIELD offers to the public *another Capital Likeness of Gen. La Fayette* stamped upon Buttons of several sizes – extra rich gilt. They were manufactured by Leavenworth, Hayden & Scovill, of Connecticut, and will be sold in quantities to suit purchasers. The likeness was executed by C. C. Wright (Durand & Wright) from a plaster cast, taken a few weeks ago by Mr. Frazer, which is pronounced by artists to be very superior.

*Boys' Clothing Emporium,*

Oct 8 303 Broadway, corner of Duane-st.

SOURCE: *New York Commercial Advertiser*, October 1824 to January 1825, reprinted in (Davis 1951).

ACKNOWLEDGEMENTS

Q. David Bowers very generously shipped two boxes full of Lafayette literature, plus his collection of Lafayette counterstamps and medals to me, and let me study

them for months. Robert W. Hoge studied with me the “GW/Long Live the President\*” counterstamp in the American Numismatic Society Collection. The staff of the New York Historical Society was very helpful in making available to me the *National Gazette and Literary Register* of Philadelphia. I would also like to thank the staff of the New York Public Library.

## REFERENCES

- Albert, Alphaeus H. 1949. *Washington historical buttons. Washington inaugural buttons and other buttons bearing the portrait of Washington or alluding to him and his administration*. Hightstown, New Jersey: the Author. Printed by Princeton University Press.
- Bernier, Oliver. 1983. *Lafayette, hero of two worlds*. New York: E. P. Dutton.
- Bowers, Q. David. 1994. Two coins in one: large cents with interesting counterstamps. In *The token: America's other money*, ed. Richard G. Doty. New York: the American Numismatic Society.
- Brandon, Edward Ewing. 1950. *Lafayette guest of the nation. A contemporary account of the triumphal tour of General Lafayette through the United States in 1824–1825 as Reported in Local Newspapers*. Oxford, Ohio: the Oxford Historical Press.
- Davis, Edward H. 1951. *The Lafayette presentation button 1824*. Waterbury, Connecticut: Mattatuck Historical Society. *Mattatuck Historical Society, New Series*, No. 18 (April).
- Flagg, A[zariah] C[utting]. 1868. *A few historical facts respecting the establishment and progress of banks and the business of banking in the state of New York, from the adoption of the Constitution in 1777, to 1864*. Brooklyn: Rome Brothers.
- Garrett. 1981. *The Garrett collection*, Part 4. March 25–26. Los Angeles: Bowers and Ruddy Galleries.
- Idzerda, Stanley J., Anne C. Loveland and Marc H. Miller. 1989. *Lafayette, hero of two worlds: the art and pageantry of his farewell tour of America, 1824–1825: Essays*. Flushing, New York: Queens Museum.
- Kynaston, David. 1994. *The city of London*. Volume 1: *A world of its own 1815–1890*. London: Pimlico (Random House).
- Rulau, Russell. 1997. *Standard catalog of United States tokens 1700–1900*. Iola, Wisconsin: Krause Publications.
- Stack's. 2003. *Americana sale*. January 21–23. New York: Stack's.
- Stack's. 2004. *John J. Ford, Jr., collection, Part II*. May 11. New York: Stack's.
- Wirth, Max. 1890. *Geschichte der Handelskrisen*, 4th ed. Frankfurt/Main: J. D. Sauerländer.



## Catalogues and Their Collectors

ALAN S. WALKER\*

During the early Renaissance coins began to be collected in an organized way, as objects of art, as witnesses to history, or for didactic purposes (collecting may, in fact, be much earlier—for example, the moneyers of the emperors Augustus and Trajan copied or reissued certain coin types struck up to several hundred years earlier). Coin collections were considered to be a testimony to their owners' higher cultural station and the desire to collect spread rapidly among the upper levels of society: royalty, members of noble families, antiquarians, scholars, doctors, merchants. The earliest printed book on ancient numismatics dates to 1514 and the first auction devoted solely to coins occurred in 1598; the production of further works on numismatic subjects and of auctions containing coins increased dramatically from the sixteenth century on, attesting to the widespread interest in collecting that has continued until the present day. This long history of coin collecting means that a surprising number of the coins on the market today have actually been circulating from collector to collector for hundreds of years.

The intent of this essay is to present the stories of a number of people, some still famous today, others barely known, who formed collections of Greek coins during the later nineteenth and early twentieth centuries. These individuals have been chosen for two reasons: 1) the coins they owned were published with photographic documentation (most in well-illustrated auction catalogues, one in a lavish private publication) and, thus, can still be identified when they reappear on the

\*alan.walker@bluewin.ch

market today (though their provenance may, in fact, be unknown to their present owner); and, 2), they all had fascinating lives.

**Ioannes Photiades Pasha** was a Greek who served as a high-ranking member of the Ottoman diplomatic service during the second half of the nineteenth century. He was ambassador to Athens during the 1860s, was made Vizier in 1878, and then governor of Crete from 1879 to 1885. There he presided over a largely Greek and relatively semi-autonomous government but was recalled in the face of armed disturbances in 1885. In 1886, he was made ambassador to Italy<sup>1</sup> and in 1892 he was ambassador to Belgium. According to a handwritten note in a copy of the auction catalogue once in the library of Münzen und Medaillen in Basel (hereafter, M&M), he died in early September 1892. His family seems to have owned extensive land in southern Ionia, including Miletus and extending all the way up to Priene; after 1923 this land was exchanged for an estate near Thessalonika that had been once owned by the Turkish governor of the area.<sup>2</sup> His importance for us is not only that he collected ancient Greek, Roman Provincial and Byzantine coins for thirty years, but that thanks to his high rank he had the unparalleled chance to amass an extraordinary and highly specialized collection. In some ways this collection was a rather 'subversive' one for an Ottoman official to have formed: it only contained coins from Thessaly through the Cyclades (i.e., what was then the independent kingdom of Greece), from Crete, from the cities of Byzantium and Calchedon, and from the Byzantine Empire. At some time in 1889 he consigned them for auction to H. Hoffmann in Paris; his Greek coins, presented in a catalogue that contained 1526 lots illustrated on 8 plates, were sold on May 19–24, 1890. The importance of this auction was in its specialized nature: no sale had ever before presented such a rich selection of the coins of the Greek Mainland (and none would ever do so again). For example, it contained no less than 401 lots of Athens (lots 473–477 and 491–886, including a total of 531 coins). Alas, the small number of coins illustrated makes it quite difficult to track down any pieces still on the market today, but having only a limited number of plates was typical for auction catalogues of the time; this would, however, soon change. This catalogue also had the distinction of being written by the famous German scholar Wilhelm Froehner (1834–1925—he lived most of his life in Paris, having been appointed to a position in the Louvre by Napoleon III)<sup>3</sup> with the help of the equally famous Swiss numismatist Friedrich Imhoof-Blumer. The Byzantine coins appeared in a

1. Cf. D. Bertsch, *Anton Prokesch von Osten*, Munich 2005, p. 600.

2. I would like to thank the Turkish collector, Muharrem Kayhan, for this information.

3. On Froehner working for H. Hoffmann, see A. Erman, *Mein Werden und mein Wirken*, Leipzig 1929, p. 138. Furthermore, see M. C. Hellmann, *Wilhelm Froehner*, Paris 1982; O. Masson, "Wilhelm Froehner numismate," *Revue Numismatique* (1994), pp. 308–329.

second catalogue and were going to be sold the following Friday and Saturday (May 23–24, 1890) but shortly before the sale was meant to begin all 682 lots were bought en bloc by the Hermitage in St. Petersburg.

In the early Spring of 1905 collectors, dealers and scholars all over the world began receiving the extraordinarily thick thirteenth auction catalogue of Dr. Jacob Hirsch, sent from his offices at Arcisstrasse 17 in Munich, right around the corner from the Antikensammlung and the Glyptothek. With a front cover adorned with a drawing of a Greek temple, it contained over 300 pages of text describing 4627 lots of Greek coins that were illustrated on an unprecedented 58 plates; it was by far the largest and best illustrated auction catalogue of ancient coins to have appeared up to that time. The collection it contained was truly encyclopedic: not only were there great rarities in silver and gold, there were representative pieces in all metals including numerous bronzes, both autonomous and Roman Provincial, that had hitherto rarely been illustrated other than in scholarly publications. The collector behind this collection clearly had a keen eye, a fine academic sense of history, and ample financial resources; but who was he? Hirsch only tells us, on the title page, that what was being presented in Auction XIII was “a highly important collection of Greek coins from the estate of a well-known Archaeologist”. But who? Well, of course, many people certainly knew that it was the late Professor Athanasios Rhusopoulos, a Greek archaeologist and philologist who had been born in 1823 in Macedonia and died in Athens in 1898.<sup>4</sup> He began his education in Constantinople but soon went on to the University in Athens and then, in 1847, to Germany where he studied Greek philology and archaeology. Returning to Greece in 1853 he began teaching in the gymnasium in Patras but then moved on to the University of Athens (assistant professor of classical philology in 1855, full professor in 1860). On September 6, 1868, he transferred to the archaeology department where he taught until his retirement in 1885. Aside from writing a considerable number of books and articles, primarily on archaeology and philology, he also wrote one short study on coins, which appeared in the *Athenische Mitteilungen* of 1879;<sup>5</sup> it was on a rare drachm of Alexander of Pherae that was then in the collection of none other than his contemporary Photiades Pasha (see lot 171 of the Hoffmann

4. B. Petrakos, *Η εν Αθήναις Αρχαιολογική Εταιρία*, Athens 1987, pp. 40, 46, 193, 315. A coin that A. Rhusopoulos once had published (“Das Monument des Themistokles in Magnesia,” *Athenische Mitteilungen* 21 (1896), pp. 18–26), was dealt with by L. Forrer, “Le monument funèbre de Thémistocle à Magnésie figuré sur une monnaie unique de l’ancienne collection Rhusopoulos,” *Bollettino di Numismatica* 3 (1905), pp. 89–94 (the coin in question is lot 3727 in the Hirsch Sale).

5. A. Rhusopoulos, “Δραχμή Αλεξάνδρου του Φεραίου,” *Athenische Mitteilungen* 4 (1879), pp. 187–190; *id.*, “Αγγείονκορινθιακόν,” pp. 316–323.



sale of 1890, illustrated on pl. I). The two collectors must have been more than just acquaintances: they were surely friends united by their common interest in coins (could some of Rhusopoulos' extensive selection of Cretan coins—there were 300 lots—have come to him through the hands of Photiades?). Of course, their collections were quite different since Rhusopoulos took on the whole Greek world rather than just the Greek Mainland and the Islands: his catalogue contained *only* 226 lots from Athens (lots 1888–1894, 1928–2146, including 243 coins). Yet Hirsch's catalogue was not merely a carefully written list the way Froehner's was: with its 58 plates it became a major numismatic reference work, albeit, as we shall see, one that would be dethroned some 16 years later. Two final comments: the huge number of coins in Hirsch XIII was by no means all of Rhusopoulos' collection. In fact, he had a tremendous number of duplicates that were apparently bought en bloc by Jacob Hirsch: they stayed in Hirsch's stock until his death when the remainder passed to his heir Leo Mildenberg who sold them up until the 1990s. Another interesting fact about Rhusopoulos is that his daughter Sophie married the German scholar of Greek painting Ernst Pfuhl (1876–1940), who met her when he was excavating on Thera. He later became professor in Basel<sup>6</sup> and one of his students was none other than the eminent numismatist Herbert Cahn (1915–2002).

While for numismatists Rhusopoulos is still a famous name, as a professor of archaeology he is little known today. However there is a collector of Greek and Roman coins who is very well known to us—he was 28 years younger than Rhusopoulos and may even have made his acquaintance when he met Schliemann in Athens in 1883—but whose exploits as an archaeologist and traveler made him not only a familiar figure in his own time but one whose fame also continues to the present day. Arthur (and from 1911 Sir Arthur) John Evans was born on July 8, 1851, and died, three days after his ninetieth birthday, on July 11, 1941.<sup>7</sup> He was the son of Sir John Evans who, curiously enough, was born in 1823, the same year as Rhusopoulos, and died in 1908, 10 years after Rhusopoulos. The older Evans was himself a distinguished archaeologist and numismatist (he was introduced to coins by his father, Reverend Arthur Benoni Evans [1781–1854], and specialized

6. On Pfuhl, see K. Schefold in R. Lullies, W. Schiering (eds), *Archäologenbildnisse*, Mainz 1988, pp. 192 sq.

7. Data about Evans's collecting can be found in J. G. Milne, C. H. V. Sutherland, "The Evans Collection at Oxford," *Numismatic Chronicle* (1943), pp. 77–91. Biographies (among many): Joan Evans, *Time and Chance, the Story of Arthur Evans and his Forebears*, London 1943; D. B. Harden, *Sir Arthur Evans 1851–1941, A Memoir*, Oxford 1983; S. L. Horowitz, *The Find of a Lifetime, Sir Arthur Evans and the Discovery of Knossos*, New York 1981. Furthermore, see P. Warren, "Sir Arthur Evans and his achievement," *Bulletin of the Institute of Classical Studies, London* 44 (2000), pp. 199–211.

in Roman and the Celtic coinage of Britain—he was president of the RNS from 1874 to his death in 1908).<sup>8</sup> Following what seems to have been a family tradition, the young Arthur began making drawings of coins when he was seven and coins continued to fascinate him until his death (he himself was president of the RNS from 1914 to 1919). He collected Roman coins, many of which came from the exceptional collection formed by his father, but he seems to have been especially interested in the coinage of Magna Graecia, Sicily and, for reasons that will soon be obvious, Crete. Over his lifetime he must have owned many thousands of Greek and Roman coins, including a remarkable number of rare and magnificent pieces in all metals; but he seems to have been constantly selling off duplicates (often to raise money for his excavations or to settle debts) and buying new and better pieces. Not only was he apparently an active buyer at many of the major auctions of his time, but he also sold off coins through auctions: they appeared in thirteen English, German and Swiss sales that were held from 1889 to 1934 (plus another sale that was prepared but cancelled). Some were named sales, but others were pseudo-anonymous, the most famous of those being the one with the evocative title: "...Property of a well-known Archaeologist and Traveller."

And well-known he certainly was. He began traveling in Europe in the 1860s and first went to the Balkans, one of his great loves, in 1872. He identified with the aspirations of the Southern Slavs to be free of Ottoman rule and began to report to English newspapers about the atrocities that had occurred during the revolts of the 1870s (at the same time he was also involved in archaeological researches and studies in the area). After the Austrian takeover of much of the western Balkans he made himself a thorn in their side as well, resulting in his arrest and imprisonment in Ragusa (modern day Dubrovnik) where he lived for several years. Thanks to increasing pressure from England he was released after six weeks of imprisonment, expelled from the country, and soon returned to England where he moved to Oxford. In 1884 he became Keeper of the Ashmolean Museum; he retained that position until 1908 and continued on as Honorary (later Perpetual) Keeper until his death. His enthusiasm, personal wealth and gifts turned the Ashmolean from a rather pokey provincial cabinet of curiosities into one of the most important museums of art and archaeology in the world.<sup>9</sup> In 1889 he published his epoch-making study, *The 'Horsemen' of Tarentum*, in the *Numismatic Chronicle* it remained the standard work until Fischer-Bossert's massive volume of 1999. In 1894 his eyes

8. On Sir John Evans as a collector, see A. J. Evans, "The Evans Collection of Ancient British Coins," *Numismatic Chronicle* (1918), pp. 262–269; R. D. Van Arsdell, "The missing coins from the collection of Sir John Evans," *Spink's Numismatic Circular* 92 (1984), p. 44 sq.

9. B. Thomas, *Hercules and the Hydra*. C. D. E. Fortnum, "Arthur Evans and the Ashmolean Museum," *Journal of the History of Collections* 11, 2 (1999), pp. 159–170.

turned toward Crete and in 1896 he had already coined the term 'Minoan' to describe the civilization of the Cretan Bronze Age, which he was to make famous through the excavations he began at Knossos in 1900. The discoveries he made at Knossos over a period of 30 years drew worldwide attention; and his simultaneous reconstruction of the Palace has resulted in a site that allows the visitor a real chance to see and feel what it was like over three thousand years ago. His enormous, four volumes in six plus an index volume, publication of his excavations, *The Palace of Minos*, marked a new standard for archaeological reports (of course, Sir Arthur helped finance it—original sets today are enormously expensive). He made a final visit to Knossos in 1935 (when he was 84) and was given a rapturous welcome by the people of Crete who loaded him down with all manner of honors. So, obviously, he wasn't *just* a coin collector.

From the 1870s through the 1920s Sir Arthur Evans wrote a number of articles on coins, often describing pieces in his own extensive collection; he even arranged for the exhibition of a select group of 211 of his Greek coins to be part of the famous Burlington House exhibition of 1904, but he never attempted to publish his holdings in their entirety. One collector who did was a contemporary living in Paris, who, by 1913 (if not already in 1904), had privately acquired the vast majority, if not all, of the Evans coins from the Burlington House exhibit. We know this because it was in that year that Robert Jameson published the first two volumes of his exceptionally fine collection of Greek and Roman coins, complete with extensive information on his sources, where many of those Evans coins appear as coming from the "Anc. Coll. A. J. E." (more provenances appear in the often unnoticed errata lists printed in all four of his volumes). By the time his second supplementary volume came out in 1932 he had published and described more than 2620 Greek and 538 Roman coins, fully illustrated on a total of 164 plates. In his introduction Jameson tells us that he collected Greek coins (Archaic through Hellenistic) because of their beauty but always tried to get pieces in the best possible condition. As for Roman coins, he primarily wanted a gallery of portraits. Beautifully produced, on fine paper and with superb plates taken from casts, the Jameson Catalogue is the record of a connoisseur's collection (now, complete original sets are prized and are very expensive). The coins themselves were sold shortly after World War II and are now in museums (Gulbenkian was given first pick), in a multitude of private collections or have returned to the market. Having a coin with a Jameson pedigree is something that present-day collectors can take pride in. But who was Robert Jameson?

His grandfather was Farqhar Jameson, who was born in 1789 in Forfar, Scotland, son of the Reverend John Jamieson (1759-1838) and his wife Charlotte Watson (they apparently had 17 children of whom only 3 survived). The Reverend was quite learned, and his masterwork, *An Etymological Dictionary of the Scottish*

*Language*, first issued in 1808 and revised as late as 1887, still remains a useful reference work. Farqhar was involved in finances and moved to France where he became an associate of the prominent Swiss banker, Jean-Conrad Hottinguer (born in Zurich in 1764 and died in Paris in 1841—he was married to Martha Eliza Redwood, the daughter of an American planter from Newport). Farqhar married Hottinguer's daughter Anna in 1828 (she was born in London in 1794, when her father was in exile there during the French Revolution). Farqhar died in 1857 but Anna lived on until 1887. Farqhar's son Conrad, also a banker at Messieurs Hottinguer & C<sup>o</sup>, married Céline de Portal and, in 1861, their son Frédéric Robert Jameson was born. He too became a banker and joined the 'family' firm, but he also seems to have been very erudite. This trait ran in the family, aside from his great-grandfather, his father Conrad was a distinguished collector of books, and he himself knew not only English and French, but also Arabic, Greek and Hebrew. While he apparently did not collect anything other than coins, he was, as we know, extremely passionate about them and apparently began collecting when he was about 15. In his prime he dealt with many of the most important dealers of his time and acquired his treasures through private purchases and at major auctions. It would be interesting to know how the Evans coins from Burlington House came into his hands—perhaps he visited the exhibition and then contacted Spink's or Rollin & Feuardent to see if they would act for him; or perhaps he actually knew Evans and asked him directly? At auctions he usually bid through agents, such as Rollin & Feuardent and Naville, but he also attended sales himself, especially in Paris, since he is listed as a buyer in a priced and named copy of the 1909 sale of Sir John Evans's Roman gold coins (he acquired the Numinian, lot 274, that later appeared as number 279 in his catalogue). He was a life member of the Société Française de Numismatique and was elected a Fellow of the Royal Numismatic Society in 1921; he remained in both societies until his death in 1942 (the year after Evans's). Incidentally, he held the Legion d'Honneur, which he received for his service as the head of one of the major railroad stations in Paris during World War I. According to family tradition, it was his natural mathematical ability that qualified him for the post. (Another tradition is that whenever he was about to buy a really important coin he brought a cast of it to his family and asked them what they thought of it.) He married Jeanne Amélie Gabrielle Brionne Chopin de la Bruyère (1864–1950) in 1894 and had three children, Anne-Madeleine (1897–1993), who married Edouard de Monbrison in 1920; André Conrad (1899–1978) who married Jaqueline Jeanne Juliette Vernes (1903–1965) in 1921 and collected twentieth century paintings; and a third who died young. In 1946 Jameson's two surviving children began the disposal of their father's coin collection. Gulbenkian was given first choice but, somewhat foolishly, only allowed E. S. G. Robinson, who was his scholarly advisor, to pick a maximum of 150 pieces. All the rest was apparently

acquired en bloc by Jacob Hirsch who then, in 1948, sold quite a few more to Gulbenkian; pieces, which Robinson, in his introduction to Gulbenkian I, tells us he would have gotten in the first place had he not been given that limit (and, he says, they would have been cheaper too!). Gulbenkian apparently liked to think that he drove a hard bargain, but in this case seems to have out-smarted himself. Jameson's beautiful coin cabinet, now, alas, empty of the treasures it once contained, is still in the possession of his descendents.

We now turn to a contemporary of Jameson's, a collector who also lived in Paris; they were both habitués of the Cabinet des Médailles and surely knew each other quite well. Published by the Geneva firm of Naville et Cie with the help of Jacob Hirsch, the auction catalogue that contained most of his enormous collection of Greek coins began to appear in early 1921 in mailboxes all over Europe and America. When it did the name of the coins' owner, the late S. Pozzi, instantly became famous throughout the numismatic world. In fact, this catalogue, containing 3334 lots, which, astonishingly enough for the time, are nearly all illustrated on 101 fine plates, is very possibly the best known and most famous auction catalogue of Greek coins ever produced. The enormous number of coins illustrated was unprecedented (the first sylloge fascicule only appeared ten years later) and led to the Pozzi catalogue's use as a reference book by generations of collectors and dealers: coins were described as either being *in Pozzi*, *similar to Pozzi*, *Pozzi var.* This was, in fact, the nickname of a now deceased French dealer since he described so many coins that way or, for coins that were meant to be thought of as rare, *not in Pozzi!* So important and so much in demand did this catalogue become that Schulman and Bank Leu issued a fine reprint in 1966.

While Pozzi is a revered name for numismatists, he was far more than just a great collector. In his own time he was a famous personality, both as a doctor and as a member of the glittering social, artistic and intellectual circles in Paris during the late nineteenth and early twentieth century.<sup>10</sup> Samuel-Jean Pozzi was born on October 3, 1846 in Bergerac; his father was a Calvinist minister. His mother died, probably of puerperal fever, when he was 10 and this tragic event may well have been one of the reasons why he studied medicine—he actually became a gynecologist and was responsible for the sanitary reforms that would save thousands and

10. C. Vanderpooten, *Samuel Pozzi, Chirurgien et Ami des Femmes*, Paris 1993; Ph. Lederer, "Die Sammlung Pozzi," *Der Kunstwanderer* 3 (1921), p 243 sq.; A. Dieudonné, "La Collection Pozzi," *Revue Numismatique* (1921), pp. 202–204 (on the coins only). F. Miller and C. de Costa, "Portrait of a Ladies' Man. Dr. Samuel-Jean Pozzi," *History Today* (March 2006), pp. 10–17, Miller and de Costa are in the process of writing a full-scale biography of Pozzi, forthcoming in the near future. For now see the very useful and highly detailed website Miller has produced on Pozzi, [www.doctorpozzi.com](http://www.doctorpozzi.com).

thousands of women from a death like that of his mother. Another reason was the death of his older sister Marie from typhoid in 1860. Forty years later, as Senator from Bergerac he was instrumental in arranging a new water supply and sewage system for the city. He arrived to study medicine in Paris in 1864 and began his internship in 1867; he proved a brilliant student and his good looks, charm and style sense made him a social success as well. He was in the medical corps during the Franco-Prussian War, gained his doctorate in 1873, became a professor in 1875, traveled to Scotland in 1876 in order to meet Dr. Joseph Lister, who, along with Semmelweis, had championed the use of antiseptics in surgery (Pozzi's step-mother was English and he could speak and write fluently in that language). Pozzi introduced the use of antiseptic techniques to the hospitals of Paris. In 1881, he was a chief surgeon and held the first chair of gynecology in Paris in 1884. His manual of clinical and operative gynecology, which first appeared in 1890, was translated into several languages, went through several editions, and lasted as the standard work on the subject until the 1930s. His methods were used all over the world and his reputation within his field was of the highest: at the 1909 Congress of Gynecology in New York his speech received a standing ovation. But Pozzi wasn't only interested in women as patients. From almost the moment he arrived in Paris he had a dazzling succession of female companions. Perhaps the most famous of his mistresses was the celebrated actress Sarah Bernhardt, whom he met in 1869; even after they ceased being lovers they remained devoted friends until his death (she sometimes called him Doctor Chérie, or Doctor Dieu when he was taking care of her medical problems). She was, however, the direct cause of one of his few failures: he had an important exam coming up and wrote to her to say that they had to stop seeing each other for a while so that he could study. Instead, she hurried over to his apartment and very actively kept him from studying for 16 hours. And, of course, he flunked the test.

His marriage to an heiress from Lyon in 1879 (they had two sons and a daughter, Catherine Pozzi, who became one of France's greatest female poets) provided him with the resources to live in a most fashionable way and to collect art, anthropological and archaeological objects and, ultimately, ancient Greek coins (his ancient art was sold at auction in 1919 in Paris on June 25–27, and his medals and plaquettes on the 28th). He moved in artistic, literary and political circles: his 1881 portrait by his friend John Singer Sargent (now in the Armand Hammer Museum in Los Angeles) is a tour de force; he was a friend of Dr. Adrien Proust and took the young Marcel Proust to his first formal dinner when he was only 15 (Marcel's younger brother also became a doctor and from 1904 to 1914 worked as Pozzi's assistant). Along with Emile Zola and Georges Clemenceau, he was a convinced Dreyfusard. In 1908, after Dreyfus's complete exoneration, when both he and Pozzi were present at the ceremonial burial of Zola's ashes in the Pantheon, an

enraged rightist shot Dreyfus in the arm and Pozzi immediately rushed to provide first aid. Dreyfus remained his patient until Pozzi's death ten years later. During World War I Pozzi served as a military surgeon and treated countless numbers of wounded soldiers. In one case, Pozzi had to amputate the leg of a soldier whose severe wounds in the groin area were already infected when he reached the hospital; this led to the excision of one of his testicles as well. The soldier, Maurice Machu, was rendered impotent and continually implored Pozzi to operate again to cure him. Unfortunately, Pozzi knew there was nothing to be done and had to refuse, repeatedly. Finally, on June 13, 1918, Machu, by then completely deranged, burst into Pozzi's office, shot him four times in the abdomen, and then killed himself. Pozzi was immediately brought to the hospital where he remained lucid enough to direct the attending surgeon, who, needless to say, was one of his own former assistants. Alas, there was nothing to be done and one of Pozzi's last requests was that he be buried in his uniform. He received a solemn state funeral and was buried in Bergerac.

How he found the time to collect Greek coins is something of a mystery, but collect them he did for some thirty years prior to his murder. Of course, given his superb taste in everything he did, his coins were selected with great care and with a discerning eye. He patronized the great dealers of the time and must have had representatives at all the major auctions (he actually sent his bids in directly to Hirsch for the Rhusopoulos sale—he was bidder 15 and was quite successful); but he also seems to have been visited at home every day before his office hours by all kinds of people who brought him coins and other objects they thought he might buy. He must have been very impressed by Robert Jameson's publication of his collection in 1913 because he decided to do the same thing with his. In early 1918 he requested help from the eminent French numismatist Adolphe Dieudonné (later director of the Cabinet des Médailles from 1925 to 1937) in order to make a complete catalogue of the approximately 8500 Greek coins that he owned. By June 1918 202 plates illustrating all 4630 of Pozzi's Greek coins minted in Europe had been prepared, as well as a manuscript by Dieudonné describing the first 2800. Pozzi's death ended the project. This was, of course, a great pity because so many of Pozzi's coins did not appear in the 1921 sale (especially all the bronzes). In the late 1970s, however, the late Serge Boutin acquired a set of the original plates and Dieudonné's unfinished manuscript and decided to publish them. This would have been a terrific boon to scholars and collectors but, unfortunately, Boutin insisted, for unfathomable reasons, on using the absolutely wrong kind of paper for the plates so that when the book came out in 1979 it proved a great disappointment (a luxury reprint, using better paper, and including a reprint of Naville I, appeared in Monaco in 1992 under the auspices of Le Louis D'or). As a sidelight, Dr. Pozzi's friend Robert Jameson bought coins at the

sale through an agent, while Sir Arthur Evans sent bids to Hirsch directly (he was bidder number 25; Virgil Brand was 16).

One contemporary collector who seems, alas, to have been too ill to participate in the Pozzi sale was the American **Clarence Sweet Bement**.<sup>11</sup> While his name is well known to all collectors of Greek and Roman coins from the three sales held after his death by Naville (his American and European coins were sold in 1916 and 1918 in major sales held by Henry Chapman), his coins were only a small part of his collecting life. He was born in 1843 in Mishawaka, Indiana, though his family soon left for Philadelphia, where he lived for the rest of his life. He was descended from a Bement who settled in Massachusetts in 1635 (as well as a certain Francis Cooke who came over with the Mayflower)—his father, W. B. Bement, who had a predilection for the fine arts, was the prosperous owner of a machine tool company. C. S. Bement spent most of his life in the business but at the same time was a great collector: he first collected minerals, then books and, finally, coins. His mineral collection, containing at least 12,500 specimens, was one of the finest ever made by a private individual and at one time the Imperial Museum in Vienna was desperate to get it—unfortunately for them it was purchased by J. P. Morgan as a gift for the American Museum of Natural History in New York City, and today it ranks among the museum's great treasures. Bement was so prominent in the world of minerals that one was even named after him: Bementite, which is hydrous manganese silicate that has some of the manganese replaced by iron, zinc, magnesium, and calcium. It was first found in Franklin Furnace, New Jersey in 1887 (however, recent research suggests it may not be a separate mineral species). He began to collect minerals in 1866 and by the late 1890s had spent nearly one hundred thousand dollars on them, then an enormous amount of money (though he at least broke even because Morgan paid that amount for the collection). The collection was so extensive, and so heavy, that when it was shipped by rail from Philadelphia to the American Museum of Natural History in New York in 1900 two full freight cars were needed to deliver it. He was also greatly renowned as a collector of prints and engravings and had one of the most important libraries of rare books in the United States (many of the best ended up with the Widener Library at Harvard). In fact, he was the silent partner of Dr. A. S. W. Rosenbach, perhaps the greatest rare book dealer in American history. As for coins, he began collecting late in

11. J. J. Peters and C. Pearson, "Clarence S. Bement: The Consummate Collector," *Mineralogical Record* 21 (1990), pp. 47–67. Unfortunately this article deals almost entirely with his career as a collector of minerals: the only reference to his ancient coins wrongly states that they all were sold in January 1924 (only a third, the rest were sold in June), and that the auctions took place in Lausanne rather than in Lucerne (p. 50)! For the Bement family: <http://www.bementfamily.com/index.htm>



life, during the first decade of the twentieth century. He first collected all types of coins, Greek, Roman, American and European, but he was soon tired of the more modern material and ultimately sold it off in 1916 and 1918, preferring to concentrate on his ancient coins. Given his ample financial resources, in a relatively short period of around fifteen years, he was able to build up a truly outstanding collection of ancient coins. The full importance of the collection only became apparent after his death when it appeared, almost entirely illustrated on a total of 132 plates, in the three Naville sales of 1924. Bement also arranged for a numismatic scholar, T. L. Comparette (at one point curator of the U.S. national collection at the Smithsonian) to write a catalogue of selections from his Greek collection; this was published by the ANS and appeared in late 1921. However, by this time Bement had become gravely ill; he seems, in fact, to have ceased collecting entirely and devoted his remaining time (he died on January 27, 1923) to supervising the orderly disposal of his collection. He must have made all the arrangements in advance, since his numismatic books were sold only two months after he died and the first part of his ancient Greek collection was auctioned almost exactly a year after his death on January 28–29, 1924. The remaining Greek coins and all the Roman were sold in two consecutive sales on June 23 and 28; one wonders whether the coins had already been shipped to Hirsch for cataloguing prior to Bement's death).

One of Bement's coins, a superb tetradrachm of Eretria, lot 1068 in the first sale (it came, by the way, via a private purchase from the French artist Paul Mathey who bought it directly at the Rhousopoulos sale, lot 1895), was acquired by Leonard Forrer of Spink's on behalf of Captain E. G. Spencer-Churchill (SNG Spencer Churchill 143). Spencer-Churchill had sold duplicates in *Ars Classica* XIII and XIV (1928–1929), but the remaining coins, which appeared in his *sylloge* in 1931, were primarily sold privately (aside from a Christie's sale on December 7, 1965, that only contained a few pieces). And so, at some point, but probably prior to World War II, this coin appears to have passed on to the French connoisseur and fanatic collector, Charles Gillet, better known to all Greek numismatists as "Mr. Kunstfreund" (this coin appears in the Gillet inventory plates as 915; it was bought privately by a close friend of Gillet's and, after his own death, was sold as lot 115 in *Bank Leu* 30, 28 April 1982 to Baldwin's of London who bought it for the encyclopedic collector of Greek coins known as BCD; this piece was sold as lot 310 of *Lanz* 111, 25 November 2002, and now resides in a private collection in the United States).

Charles Gillet<sup>12</sup> was born on December 26, 1879, in Lyon, one of the sons of a prominent industrialist, Joseph Gillet (1843–1923) who, through fabrics and dyes, helped found the modern chemical industry in Lyon; he also was a serious collector

12. M. Peyrenet, *La dynastie des Gillet: les maîtres de Rhône-Poulenc*, Paris 1978. This is,

of art and a patron of the fabric museum in Lyon. His three sons, Charles, Paul and Edmond, took over the family interests, but after Edmond's death Charles seems to have become head of the family firms, previously merged with another to form the French chemical giant, Rhône-Poulenc. Along with a wide web of ownerships and alliances this made, and makes, the Gillet family one of great wealth and power. Obviously, Charles Gillet had the financial wherewithal to collect on a grand scale: books, antiquities, furniture and, of course, coins of all types. Exactly when he started buying Greek coins is unknown; he may well have begun in the 1920s, but, as we have seen, he had to have bought his Jameson coins from Hirsch after World War II. This was the case, for example, with his acquisition of Jameson 2070, a fine tetradrachm of Chalcis that later appeared as lot 30 of Kunstfreund. Jameson had bought it, via Rollin & Feuardent, as lot 1480 of the Pozzi sale and Pozzi had gotten it, bidding by post directly, from the Rhousopoulos sale (lot 1873). At Kunstfreund it went into the BCD collection, remaining there until Lanz 111 (lot 116). Gillet acquired other coins in the 1950s and 1960s as well. He seems never to have bid directly for any coins at auction; he preferred using trusted dealers as his agents (as was the case with Kunstfreund 172, which had been bought for him by M&M at the Lockett sale in 1955). He actually owned quite a lot of coins: he had some important groups of French Gothic and Roman gold (probably sold anonymously during his lifetime at auctions in France —though conceivably through M&M in the early 1950s) and he also had fine runs of Hellenistic portrait coins and Siculo-Punic coins that were auctioned, also during his lifetime and also anonymously, in M&M 19 (1959) and M&M 43 (1970). But he was, of course, most famous for the anonymous sale that took place on 28 May 1974, almost exactly two years after his death on May 30, 1972, in Lausanne, around six months after his ninety-second birthday. This sale, held jointly by M&M and Bank Leu (with Ratto as a silent partner) contained 253 lots, picked from the 1217 Greek coins remaining in his collection. Shortly after Gillet's death they had been purchased jointly by the three firms from Marion Schuster, who had been Gillet's long-time mistress and had inherited the coins. In doing so they had been helped by a prominent Portuguese businessman who had not only been a friend of Gillet's but had also been convinced by him to begin collecting himself. After she died, Schuster's collection of antiquities went to at least two relatives, Mme Antoinette Schuster and Mme Mathilde Marion von Goldschmidt-Rothschild (who was the daughter of Albert Max, Baron von Goldschmidt-Rothschild and his second wife, Marie Helene Schuster-Burckhardt), who put it up for sale at Sotheby's in 1989 and 1990.

unfortunately, a very 'Frenchy' history: no family tree, few dates of birth or death and, needless to say, no index...albeit amusingly written from a critical point of view (but it mentions nothing about Charles Gillet's collecting interests or his family life).

Gillet had moved to Lausanne (where he met Marion Schuster and, at some point, divorced his wife) around the end of World War II because his conservative right-wing politics and his close relations with the Vichy regime and with German companies like I.G. Farben might very well have resulted in his imprisonment, or worse, had he stayed in France. In any event, by 1954 it was safe for him to go back to France, which he seems to have often done, but he continued to live in Switzerland until his death. Nevertheless, despite his politics he did have a keen eye for beauty, rarity and quality in coins; anyone owning one of his coins today can be happy to have a piece with such cachet, despite the frisson of notoriety that comes as part of its pedigree.

### CONCLUSION

The seven collectors discussed above came from a variety of professions: one was a high governmental functionary, two were archaeologists and classical scholars, one was a banker, another was a surgeon, one was a factory owner and the last a great industrialist; what they had in common was that they all collected coins with an overwhelming passion. It might be said that knowing about these collectors is of little importance since they were only temporary owners of the coins they possessed, but this is certainly not true. The lives of the collectors, dealers and scholars who owned, traded and studied ancient, medieval and modern coins are part of the institutional memory of numismatics—knowing why people preserved, dealt and researched coins helps to define why this field exists and why we are part of it today. I think that there should be a 'Dictionary of Numismatic Biography,' which ought to contain conveniently accessible biographies of the many people whose collecting, commercial and scientific activities made numismatics what it is. While early figures going back to the Renaissance would be included, since that is when the field began, I would think that such a work would focus on the late nineteenth and twentieth centuries, which saw a huge burgeoning of interest in numismatics, accompanied by the appearance of photographic illustrations that allow us to trace the coins involved. In *Medieval European Coinage*, vol. I, the late Philip Grierson produced an exceptionally useful gazetteer of the collectors, dealers and donors who formed the Fitzwilliam collection of medieval coins (pp. 399–414): an expanded version of this should be our model.

In 1926 W. Kündig, Lucien Naville and Jacob Hirsch produced *Ars Classica/Naville XII*, a catalogue of Greek and Roman coins containing coins from four named collections, those of E. Bissen, J. Wertheim, Sir A. J. Evans and A. de Petrowicz, but also including coins belonging to Locker Lampson, Hirsch, Virzi, Spink's, Charles Seltman and a number of other unnamed individuals. We certainly know who Evans was but what about the others? Who were they? And who were the dealers who sold them their coins and the scholars who studied them?

How do the ways these earlier collectors collected differ from those of today? Is it conceivable that any present day archaeologist, even one as distinguished as either Rhusopoulos or Evans, could dare collect in the face of the politically correct opposition of those who see collecting as an anathema? Are there private collectors today willing to publish their coins openly the way Jameson did and Pozzi wanted to do? Or will we see collections only appearing in auction catalogues anonymously, like Gillet's or the astounding 'BCD' collection of today, the most important and academically vital collection of the coinage of ancient Greece ever formed?

We simply have to learn more about the past of numismatics, and the personalities who molded it into what we have today: we can not allow these personalities to pass out of our collective memory.

### ANNOTATED BIBLIOGRAPHY

#### Ioannis Photiades Pasha

1. H. Hoffmann, 19–22 May 1890, *Named*, Greek Coins, 1530 lots, 8 pls. (1–1425, Thessaly-Islands; 1426–1526, Byzantium and Calchedon; 1527–1530, Greek extras). The coins brought a total of 124,358 Francs.
2. H. Hoffmann, 23–24 May 1890, *Named*, Byzantine Coins, 682 lots, 2 pls. (this auction did not take place, the coins being bought en bloc for 70,000 Francs just before the sale by the Hermitage).

#### Athanasios Rhusopoulos

1. Hirsch XIII, 15 May 1905 (and following days for two weeks!), *Anonymous*, "Einer hochbedeutenden Sammlung griechischer Münzen aus dem Nachlasse eines bekannten Archäologen" (= *A most important collection of Greek Coins from the Estate of a well-known Archaeologist*), 4627 lots, 58 pls. A great number of duplicates did not appear in the sale: those, and all the pieces that remained unsold, went into the stock of Jacob Hirsch.

#### Sir Arthur John Evans

1. Sotheby, Wilkinson & Hodge (SWH), 11 February 1889, *Anonymous*, "Collected Chiefly in Italy," 135 lots. Sold for a total of £303/15/-.
2. SWH, 20 January 1898, *Anonymous*, "Archaeologist and Traveller," 146 lots, 6 pls. The sale brought a total of £1828/2/-. Curiously enough, Evans seems to have regretted selling at least one of the coins in this sale because he later bought it back. An incuse drachm from Zankle, lot 61, went into the Benson collection; after that collector's death it was sold—SWH, 3–5, 8–11 February 1909 (that's right, it took seven afternoons to sell 808 lots!) lot 224—for an as-

- tonishing £90 to Hirsch. By 1928/9 it was back with Evans (see, below, sale 11, lot 824). From there it went to Lloyd (SNG Lloyd 1073) and is now in the BM.
3. Rollin et Feuardent, 20–21 June 1906, *Anonymous*, *Médailles Grecques d'Italie et de Sicile*, 583 lots, 4 pls. (Apparently R. Jameson bought all the Evans coins that were displayed in the Burlington House exhibit of 1904 and sold off the duplicates he did not want in this sale—as attested by a handwritten note on the cover of the catalogue once belonging to W. H. Woodward). For the Burlington House Exhibition, see below.
  4. Hirsch XXX, 11 May 1911, *Anonymous*, “Griechische und Römische Münzen aus dem Besitze...eines bekannten englischen Gelehrten,” (= *Greek and Roman Coins from the possessions...of a well-known English scholar*) 1298 lots, 39 pls. (Greek—primarily from Italy and Sicily but from Crete and other places as well—and Roman, mixed with material from other collectors and dealers).
  5. SWH, 19–21 December 1911, *Anonymous*, “Gentleman,” c. 464 lots (among material from other owners), unillustrated.
  6. Private Treaty, before 1913. A large number of coins once in the Evans collection appear in Robert Jameson’s first Greek catalogue published in 1913 but without any reference to a public sale containing Evans’s coins. It seems more than likely that Evans continuously sold off duplicates, especially prior to 1908 when he was often in need of funds for his excavations and to finance the building of his house, Youlbury, in Boar’s Hill.
  7. Hirsch XXXIII, 17 November 1913, *Anonymous*, “Griechische, Römische und Byzantinische Münzen aus dem Besitze von...eines bekannten englischen Archaeologen,” (*Greek, Roman and Byzantine coins from the possessions of...a well-known English Archaeologist*) 1572 lots, 39 pls. (Evans consigned Greek, Roman and Byzantine coins, including an extensive collection of contorniates. His lots were 260, 342, 422, 463–4, 535, 707 (a fake, lead trial strike of a Tanagra stater by Caprara! Now in the BM, see Ph. Kinns, *The Caprara Forgeries*, London 1984, p. 25 No. 24m), 772–73, 793–95, 850, 1074, 1234, 1370, 1519–40, 1542–48, 1550–52, and 1565–66. He was also a 50 percent partner with Hirsch (!) on the following Roman lots: 1429, 1435, 1439, 1443, 1446–49, 1451, 1455–55, 1464, 1466, 1468, 1479, 1496, 1509 and 1549.
  8. Naville III (in conjunction with Spink), 16 June 1922, *Named*, 342 lots (Roman and Byzantine gold), 11 pls. Many of the coins were originally in the collection of his father, Sir John Evans.
  9. Naville IV, 17–19 June 1922, *Named*, but mostly from other collectors as well (Michaelovitch, Weber, et al.—only a very small number of pieces came from Evans), 1035 lots (Greek), 36 pls.
  10. Ars Classica XII, 18–23 October 1926, *Named*, but mostly from other collectors as well. Evans’s coins, all Cretan, appeared as lots 1580–86, 1588–92, 1594,

- 1596–97, 1600–10, 1612–15, 1617–20, 1622–25, 1628–32, 1635–36, 1640–43, 1645–52, 1654–57, 1660–62, 1664–67, 1669, 1671, 1673–76; illustrated on pls. 46–49.
11. SWH, c. 1928/9, *Named*, South Italy and Sicily, 1103 lots, 50 pls. This sale was planned, but never held. However, plates were made and it seems that a manuscript for the text (by L. Forrer) exists in the Spink archive. In the event, Spink apparently bought all the coins en bloc; many of the coins soon ended up in the Lloyd Collection<sup>13</sup> and others went to Lockett. Interesting information on the earlier and later history of the coins from Tarentum in this group can be found in W. Fischer-Bossert, *Chronologie der Didrachmenprägung von Tarent 510–280 v. Chr.*, Berlin-New York 1999, p. 445, “Slg. Evans, PhF = Photofile im Britischen Museum (1928/29).”
  12. Glendining & Co., 9–13 March 1931, *Named*, but mostly from other collectors as well (Nordheim et al.), 1238 lots, 31 pls.
  13. Cahn 80, 27 February 1933, *Named*, but with some from other collectors as well (Lawrence), 1307 lots, 37 pls.
  14. Ars Classica XVII, 3 October 1934, *Named*, lots 1001–2072 (Roman and Byzantine only), pls. 28–65. The text describing the Evans coins, which included many pieces originally owned by his father Sir John Evans, was written by L. Forrer.

In addition, 211 of Evans's coins, all from Magna Graecia and Sicily save for 9 from Crete, were published by G. Hill in the famous catalogue of the Burlington Fine Arts Club Exhibition of Ancient Greek Art held in 1904. Most were illustrated on pls. CI–CIII. A considerable number of these coins, including virtually all of the really beautiful ones, were bought by Robert Jameson through a private treaty sale (as noted above, he sold off the duplicates in sale 3). All the coins that remained in the Evans collection at his death were bequeathed to the Ashmolean. It should also be noted that Sir Arthur Evans organized the sale of a considerable part of the collection of Roman gold that belonged to his father Sir John Evans (who had died on 31 May 1908): Rollin et Feuadent, 26–27 May 1909, *Semi-anonymous* (Collection J. E.), *Monnaies Romaines en or*. 363 lots, all but 361–63 illustrated on 15 pls.

#### Robert Jameson

Collection catalogues printed by Feuadent Frères, Paris and written by Jameson himself.

1. Volume I. *Monnaies Grecques I* (1913), 1844 coins, 97 pls.
2. Volume II. *Monnaies Impériales Romaines I* (1913), 420 coins, 19 pls.

13. Cf. C. Lorber, “Early History and Philanthropies of the Garrett Family,” in NFA— Bank Leu, 16–18 May 1984, The Garrett Collection, Part I, p. 37 sq.

According to the original advertising flyer of 1913, Volumes I and II could only be purchased as a set and cost 100 Frs.

3. Volume III. Supplement I, (1924). *Monnaies Grecques*, (1845), 2372 coins, (98), 125 pls.; *Monnaies Impériales Romaines*, (421), 487 coins, (20), 23 pls.
4. Volume IV. (1932). Supplement II, *Monnaies Grecques*, (2373), 2620 coins, (126), 138 pls.; *Monnaies Impériales Romaines*, (488), 538 coins, (24), 26 pls.

Prior to the publication of the catalogue a number of coins that Jameson had bought from Evans en bloc c. 1904 were sold as unneeded duplicates in a Rollin & Feuadent sale in 1906 (see, above, Evans sale 3).

Some duplicates were sold by the collector during his lifetime and are so noted at the beginning of each catalogue; he died in 1942 and the collection was then sold privately. The first 150 pieces were sold to Gulbenkian in 1946, the remainder was then acquired by Jacob Hirsch who dispersed them directly to collectors (he sold quite a few to Gulbenkian in 1948) and through auctions; considerable numbers remained in his stock at the time of his death and continued to be sold by Leo Mildenberg up until the last pieces were disposed of in the 1980s.

#### Samuel-Jean Pozzi

Naville I, 14 March 1921 (actually sold beginning on 4 April), *Named*, 3334 lots, 101 pls.

S. Boutin, *Catalogue des monnaies grecques antiques de l'ancienne collection Pozzi. Monnaies frappées en Europe*, Maastricht 1979.

#### Clarence Sweet Bement

1. Naville VI, 28–29 January 1924, *Named*, Greek Part I, Iberia—Euboea, 1082 lots, 37 pls.
2. Naville VII, 23–24 June 1924, *Named*, Greek Part II, Attica-Mauretania, (1083), 1909 lots, (38), 68 pls.
3. Naville VIII, 25–28 June 1924, *Named*, Roman, 1770 lots, 64 pls.

In addition, selections from his Greek coins were published by T. L. Comparette: *A Descriptive Catalogue of Greek Coins Selected from the Cabinet of Clarence S. Bement*, New York 1921, 370 coins described and all illustrated on 25 pls.

His U.S. and Foreign coins were sold during his lifetime:

H. Chapman, 29 May 1916, *Named*, U.S., 827 lots, 8 pls.

H. Chapman, 26–27 June 1918, *Named*, European, 999 lots, 9 pls.

His numismatic books were sold after his death:

T. L. Elder, 29 March 1923, *Named*, 271 lots.

## Charles Gillet &amp; Marion Schuster

1. Monnaies et Médailles XIX, 5–6 June 1959, *Anonymous* (“amateur distingué en Suisse romande”), Hellenistic Greek, with coins from several other collectors. 604 lots, 28 pls.
2. Monnaies et Médailles 43, 12–13 November 1970, *Anonymous*, Punic, 60 lots, 6 pls. (the remainder of the catalogue contained coins from other sources).
3. Bank Leu & Münzen und Medaillen, 28 May 1974, *Anonymous*, “Griechische Münzen aus der Sammlung eines Kunstfreundes” (but most people knew whom the title *Kunstfreund* stood for), 253 lots, all illustrated.

Gillet apparently also owned collections of Roman and French Gothic gold coins; they were, perhaps, sold in French auctions. In addition, a complete photographic record was made of all the Gillet Greek coins remaining after the M & M auctions, including the coins that were selected for the *Kunstfreund* sale: this consists of 58 plates illustrating 1217 coins.

The collection of antiquities belonging to Marion Schuster (Gillet’s long-time mistress) appeared in two named sales:

1. Sotheby’s, London, 10 July 1989, *Named*, 89 lots. The cover piece was a marble, ‘Kilia’ type Anatolian idol (lot 66), which sold for a hefty £220,000 (= \$380,600). When it reappeared recently in Christie’s, 8 June 2005, lot 37, it went for an enormous \$1,808,000!
2. Sotheby’s, London, 10 July 1990, *Named*, lots 289–320.





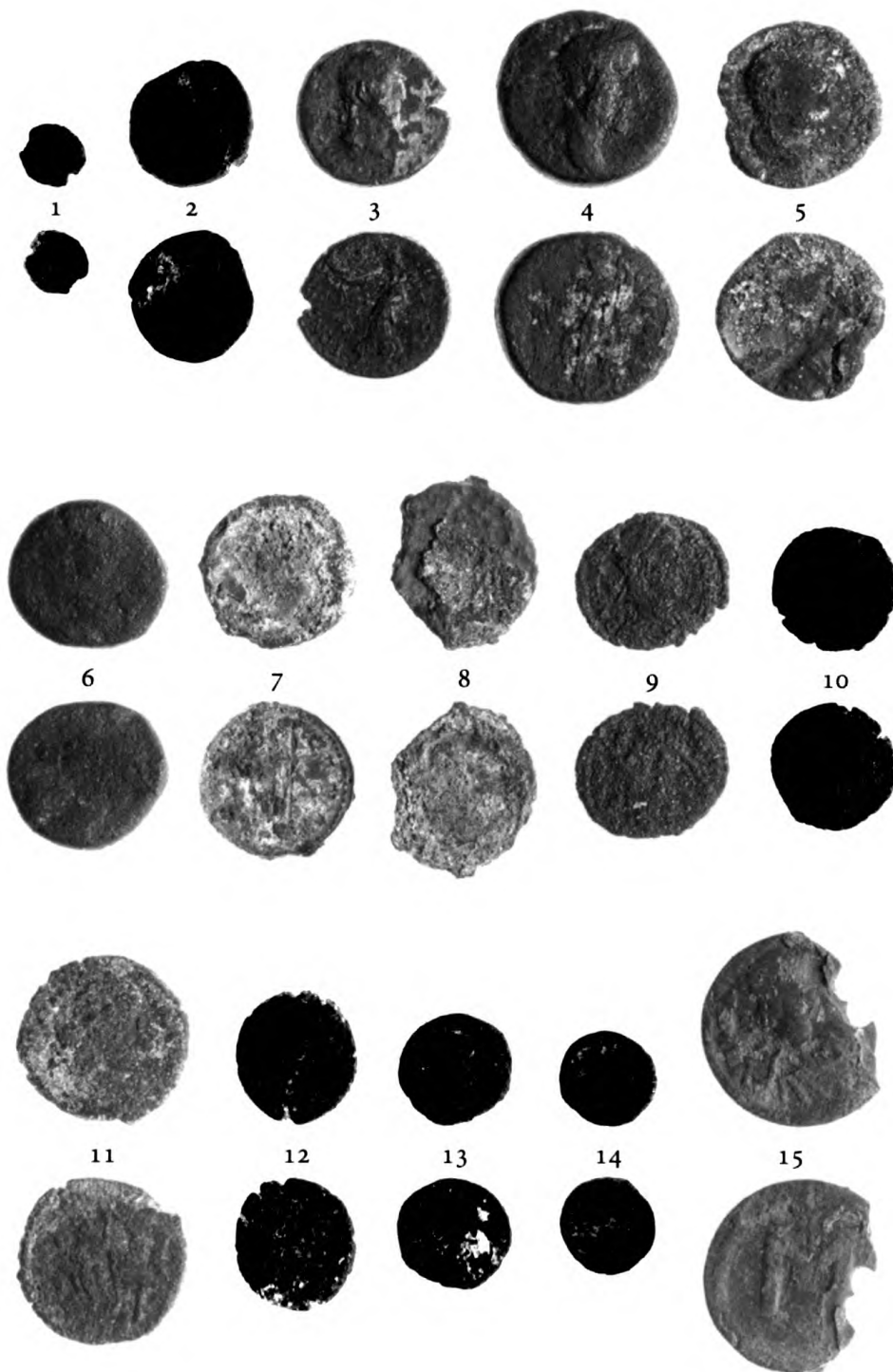




## Plates

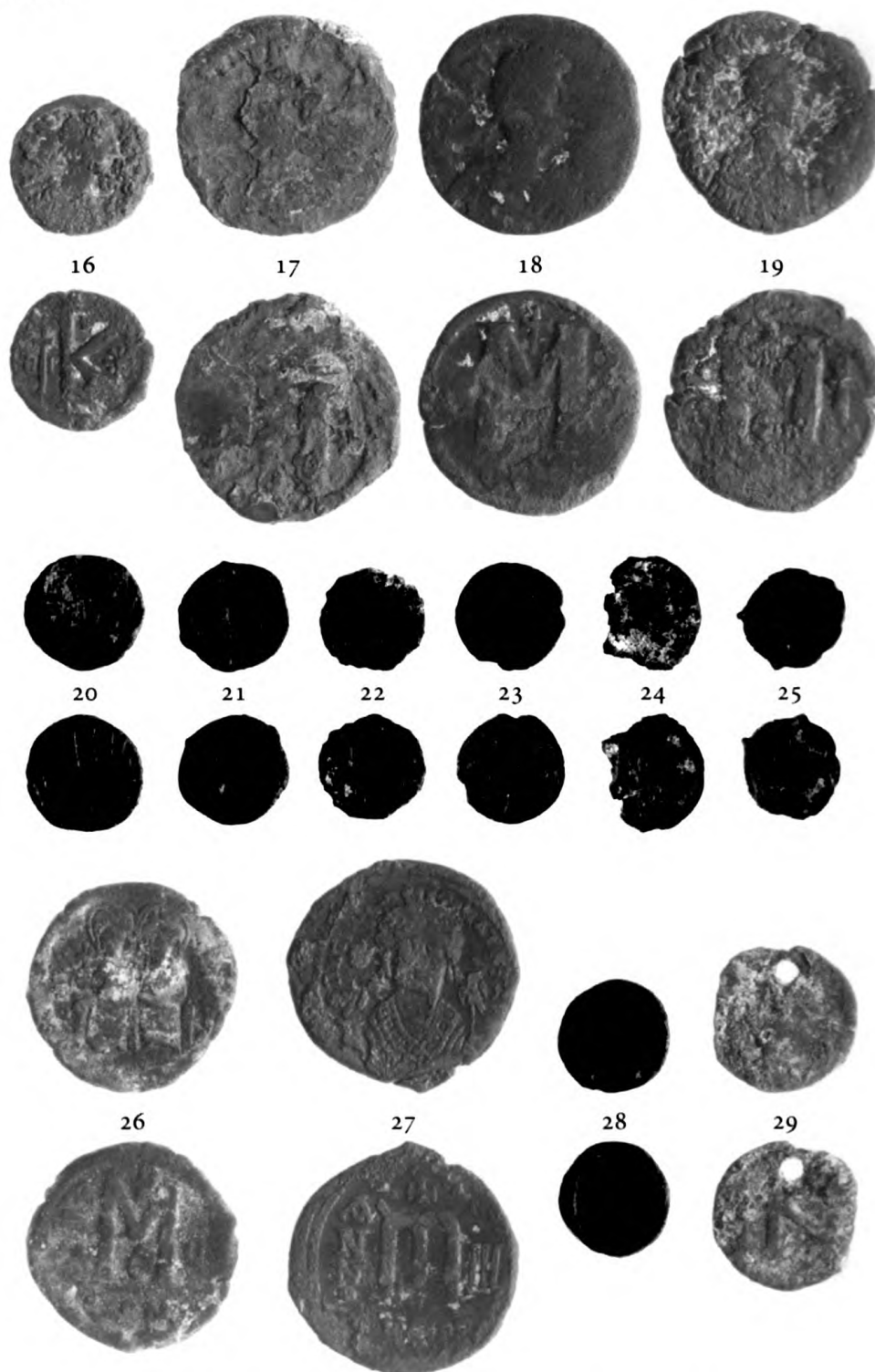


Plate 1

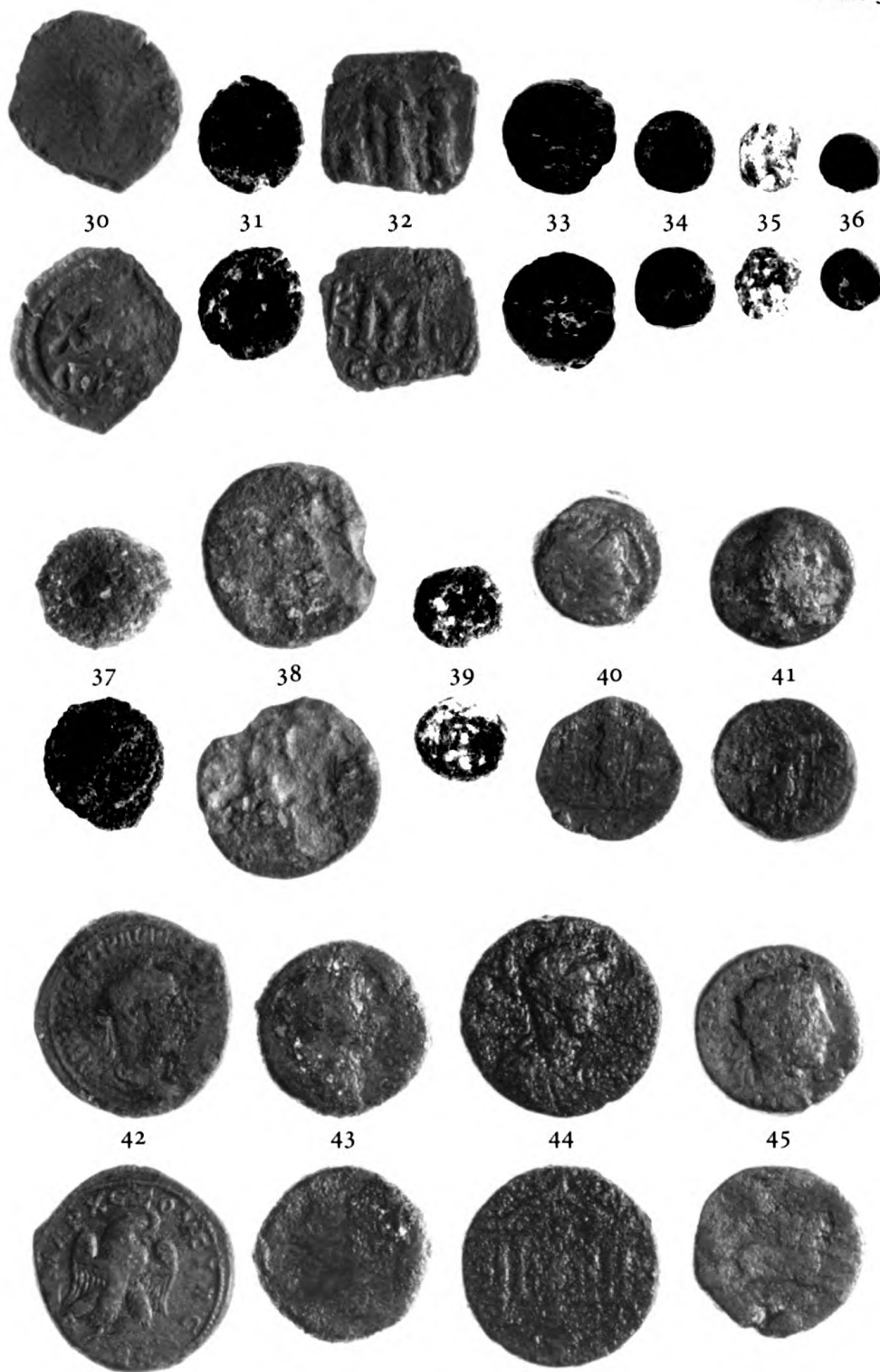


Coins from the Excavations at Beisan: 1929-1935

Plate 2



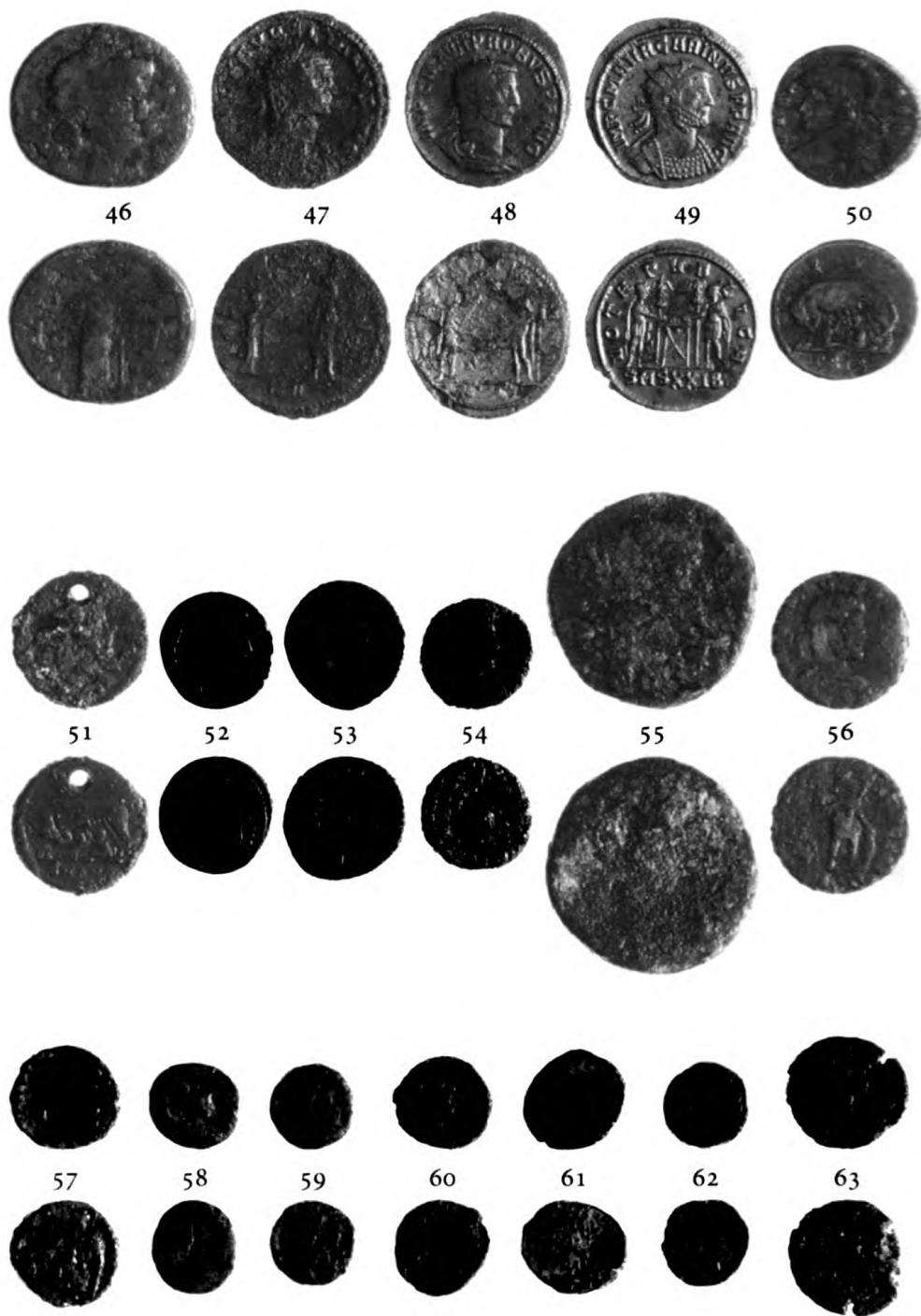
Coins from the Excavations at Beisan: 1929-1935



Coins from the Excavations at Beisan: 1929-1935



Plate 4



Coins from the Excavations at Beisan: 1929-1935

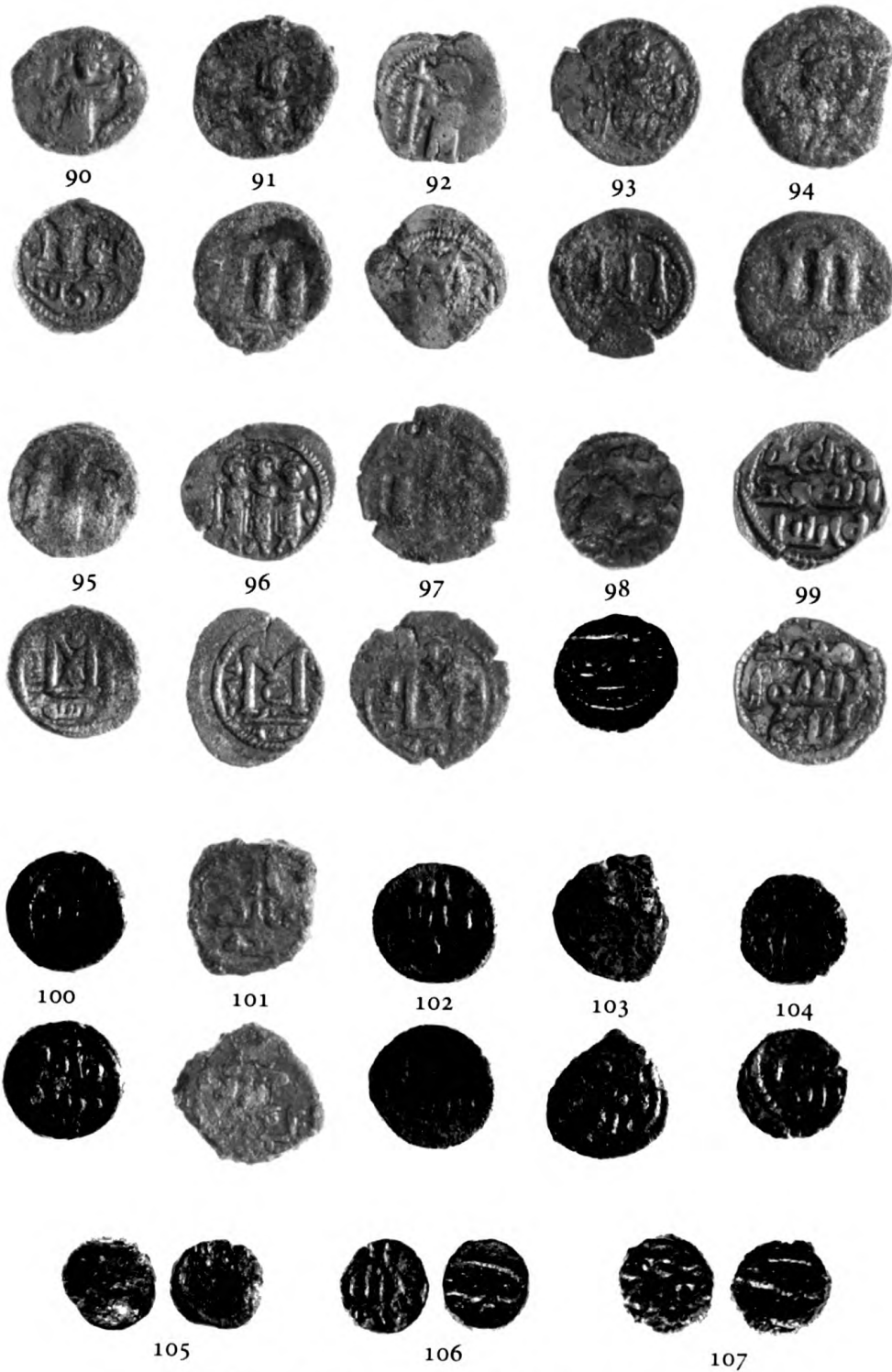


Coins from the Excavations at Beisan: 1929-1935

Plate 6

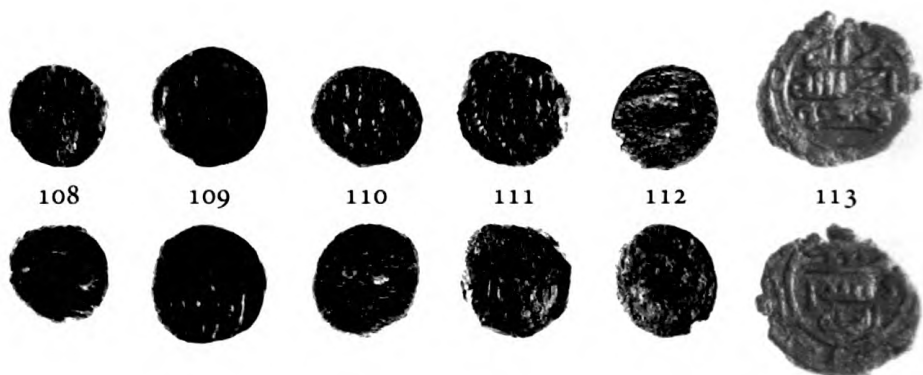


Coins from the Excavations at Beisan: 1929-1935

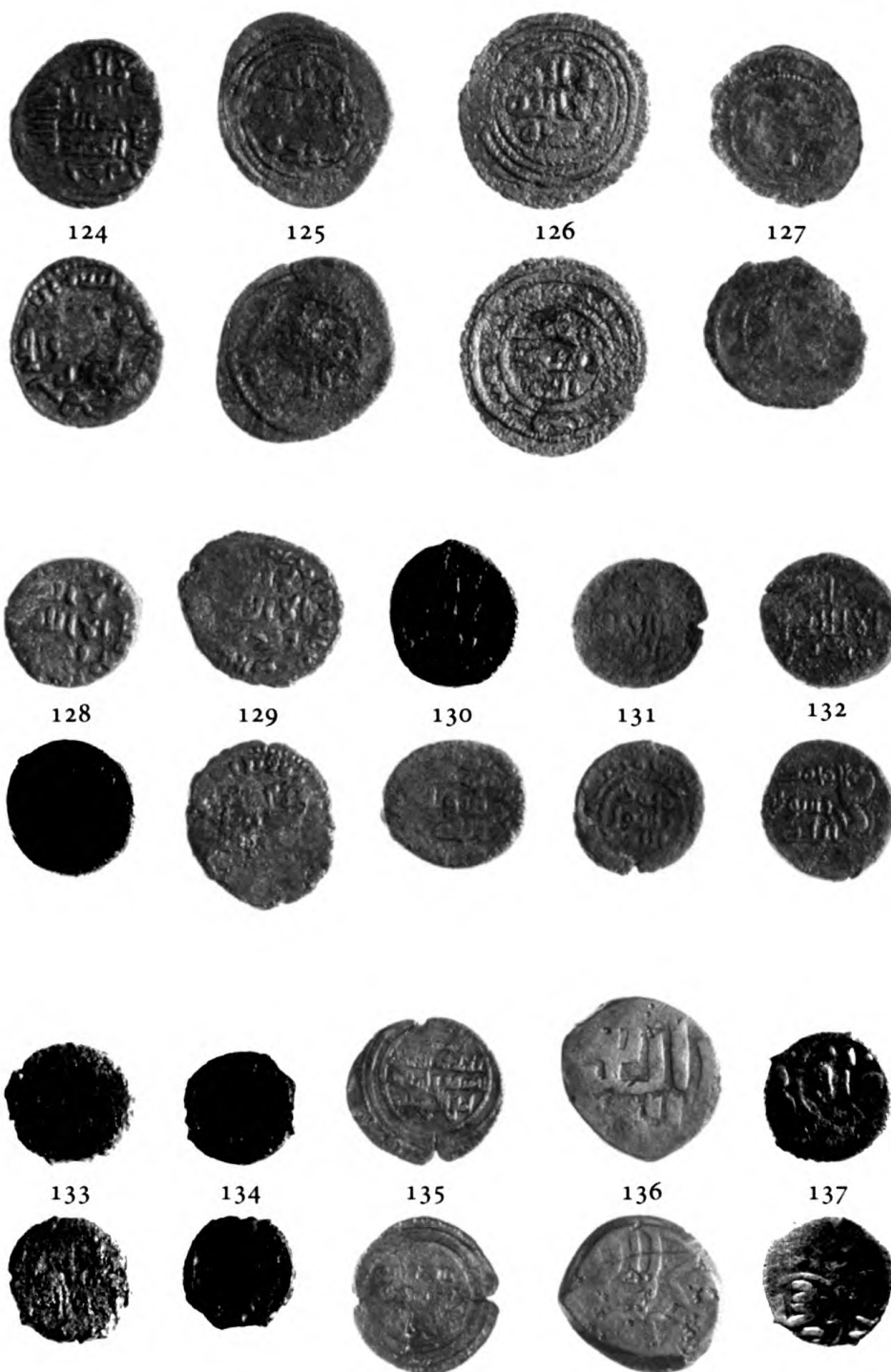


Coins from the Excavations at Beisan: 1929-1935

Plate 8



Coins from the Excavations at Beisan: 1929-1935



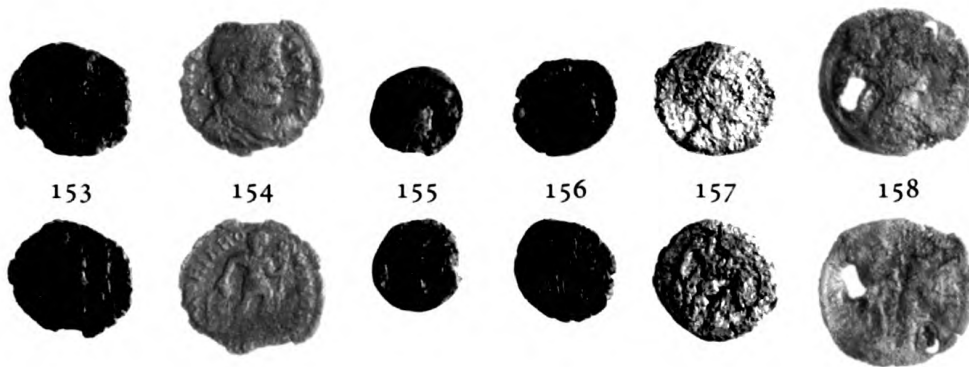
Coins from the Excavations at Beisan: 1929–1935

Plate 10



Coins from the Excavations at Beisan: 1929-1935

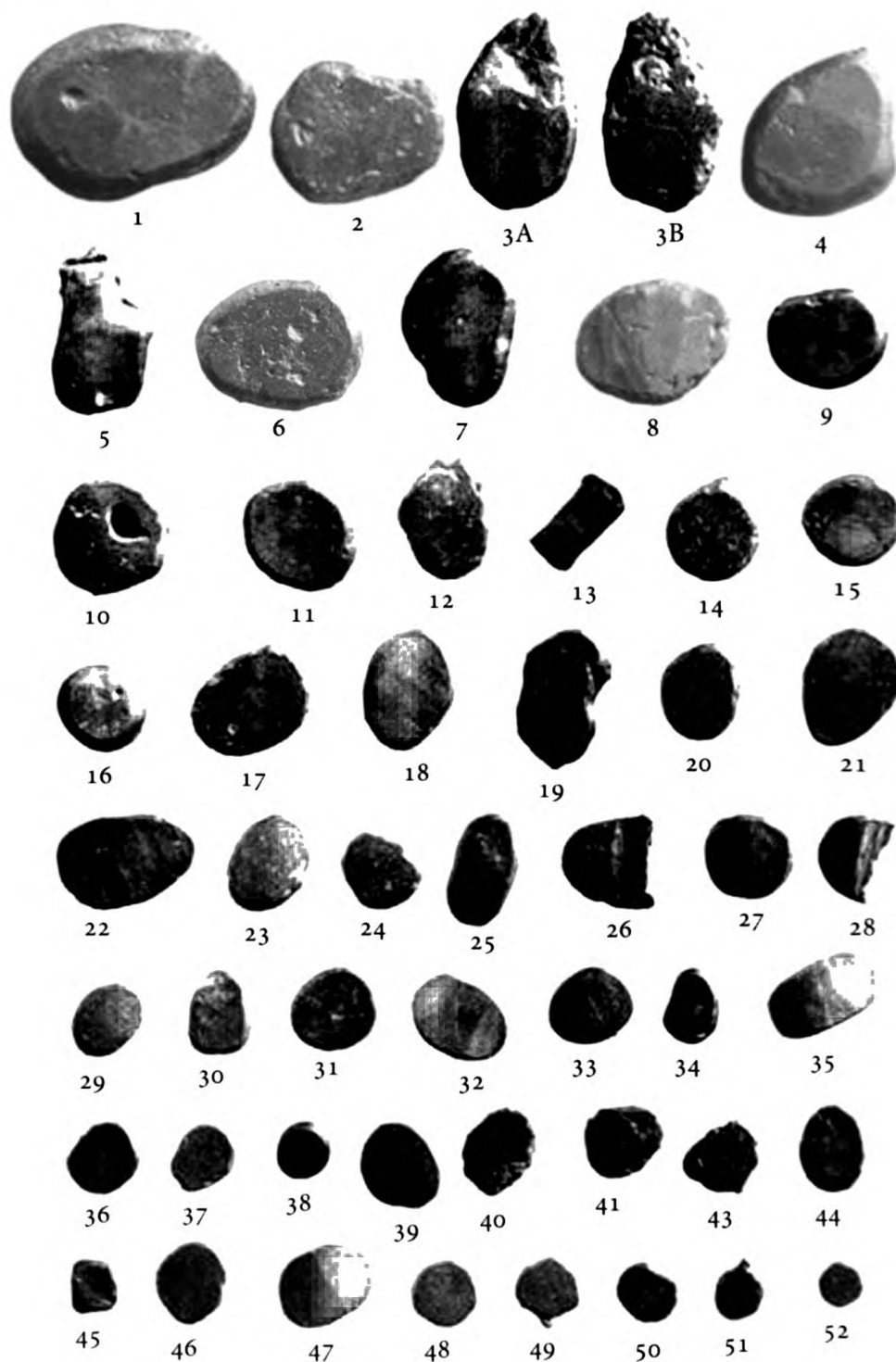




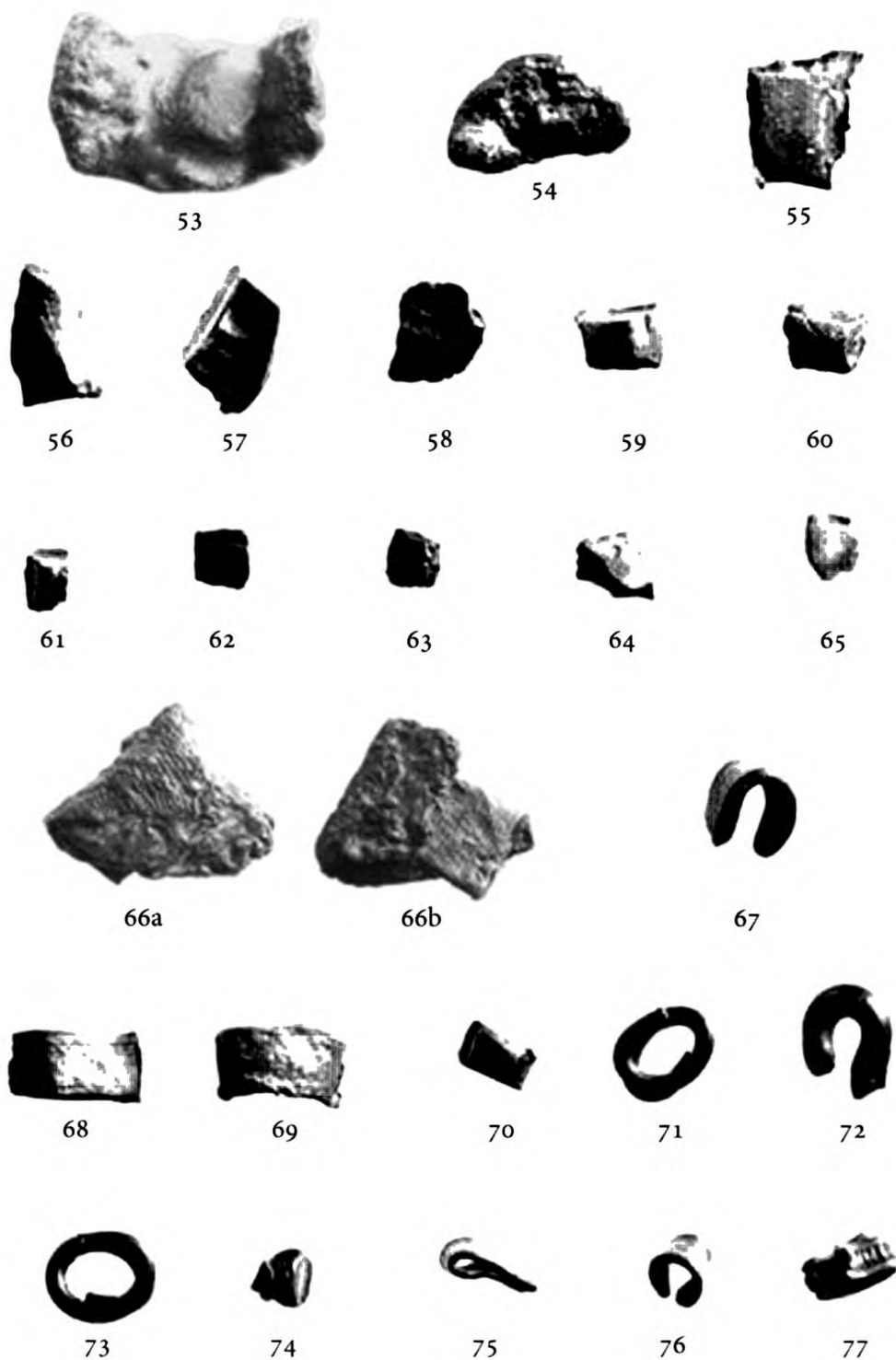
Coins from the Excavations at Beisan: 1929–1935



Plate 12



A Hoard of Archaic Coins of Colophon and Unminted Silver



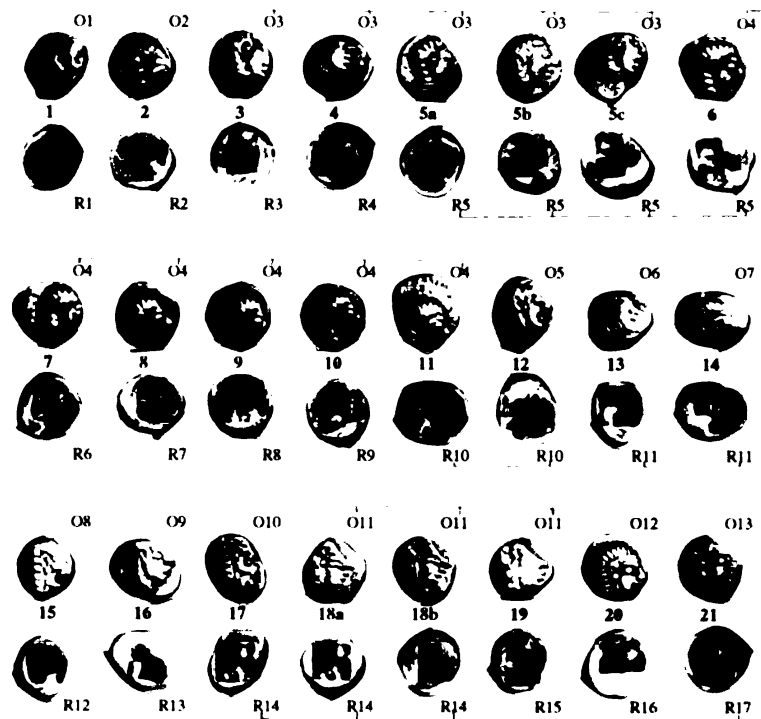
A Hoard of Archaic Coins of Colophon and Unminted Silver

# Plate 14

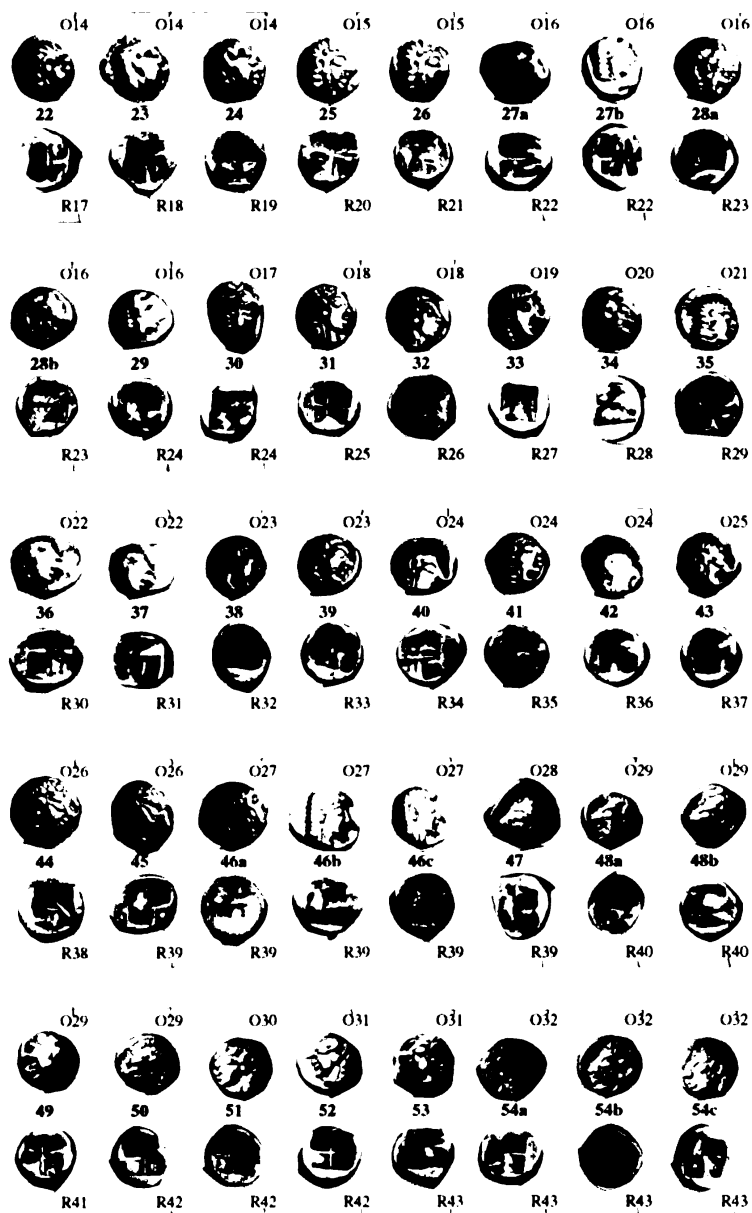
## Twelfth



## Twenty-fourths

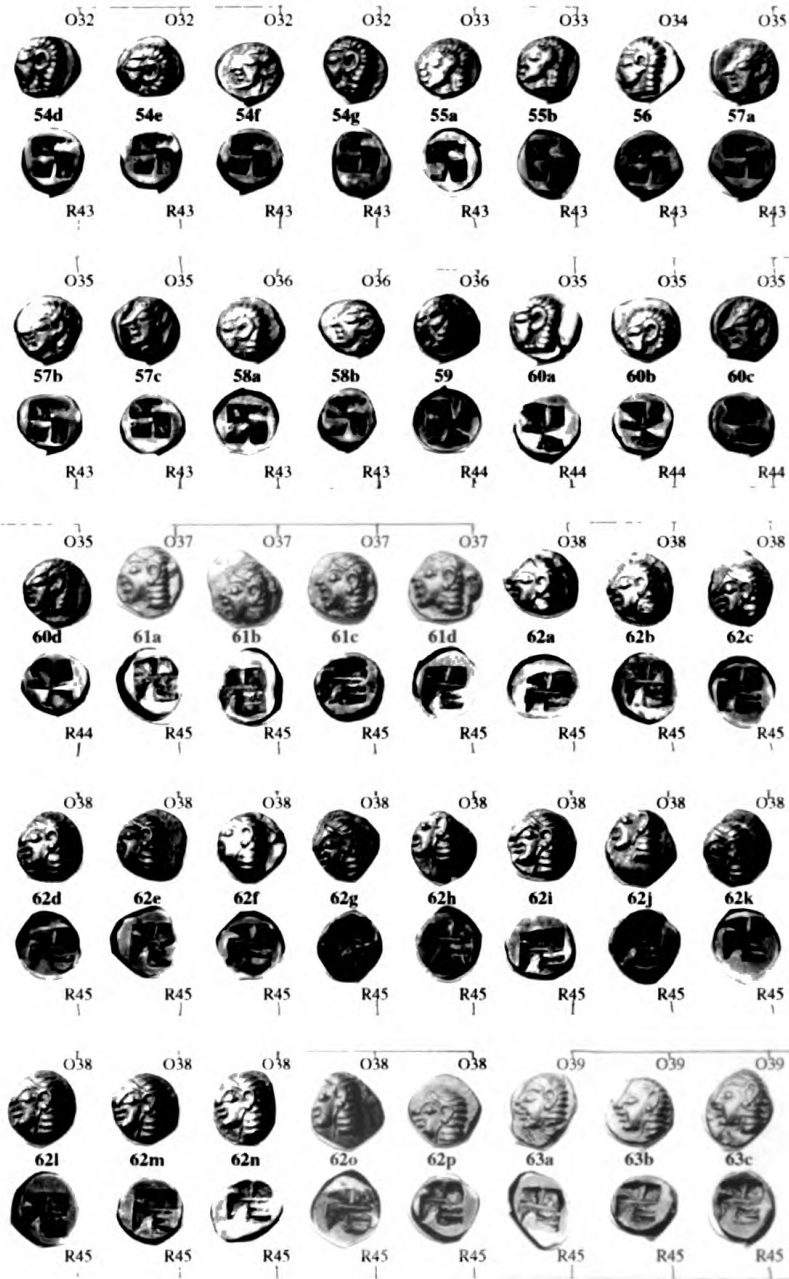


A Hoard of Archaic Coins of Colophon and Unminted Silver

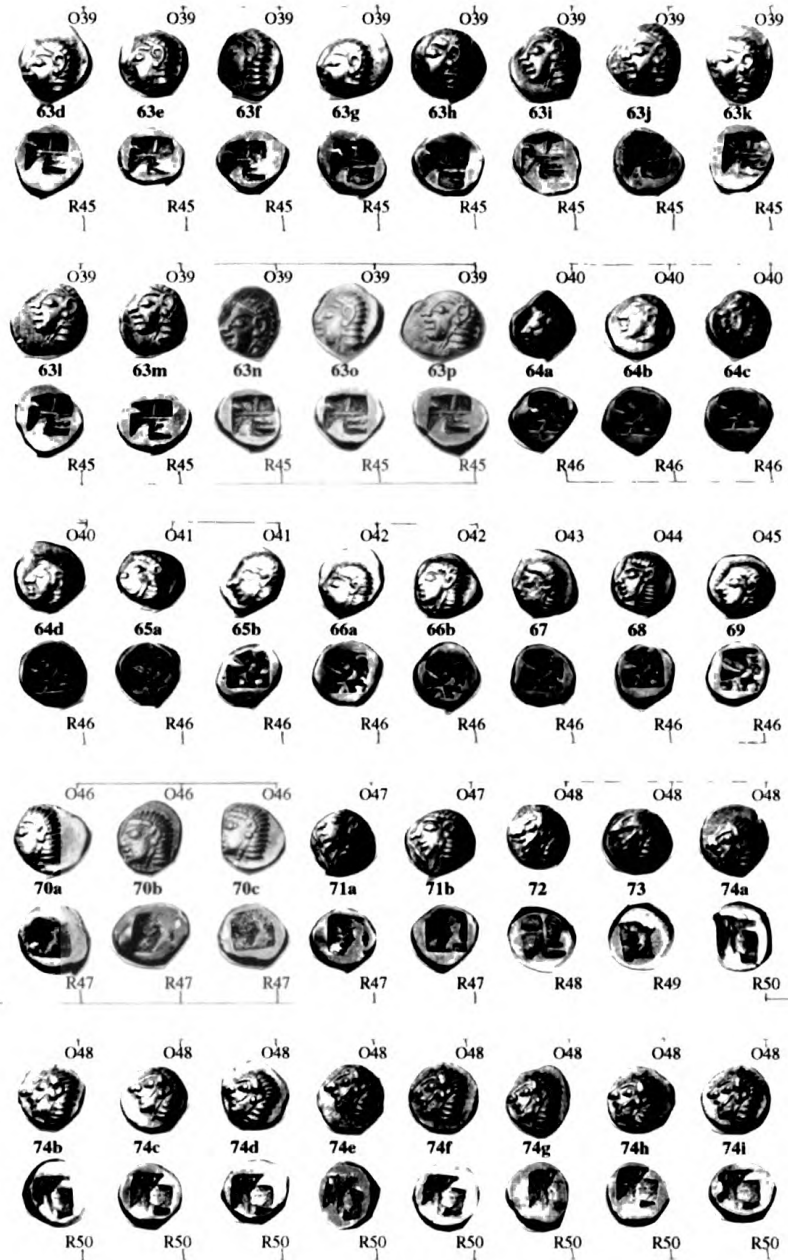


A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 16

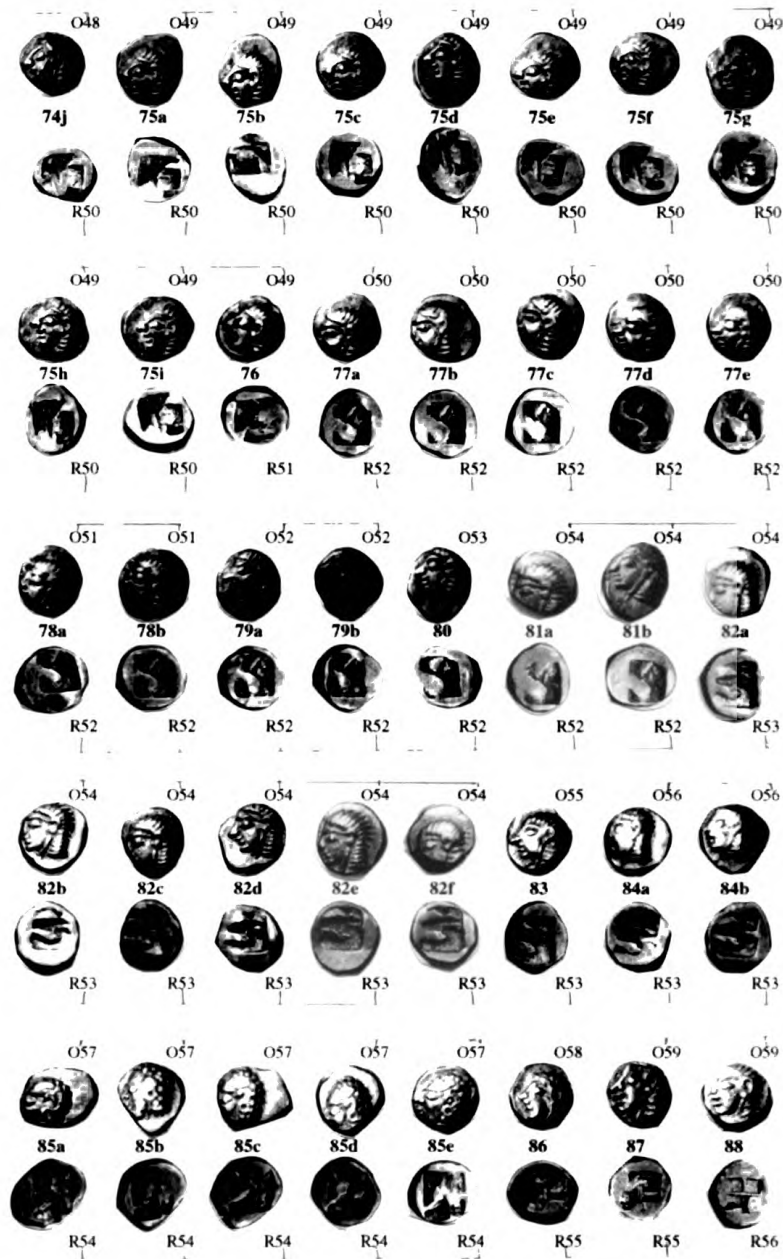


A Hoard of Archaic Coins of Colophon and Unminted Silver

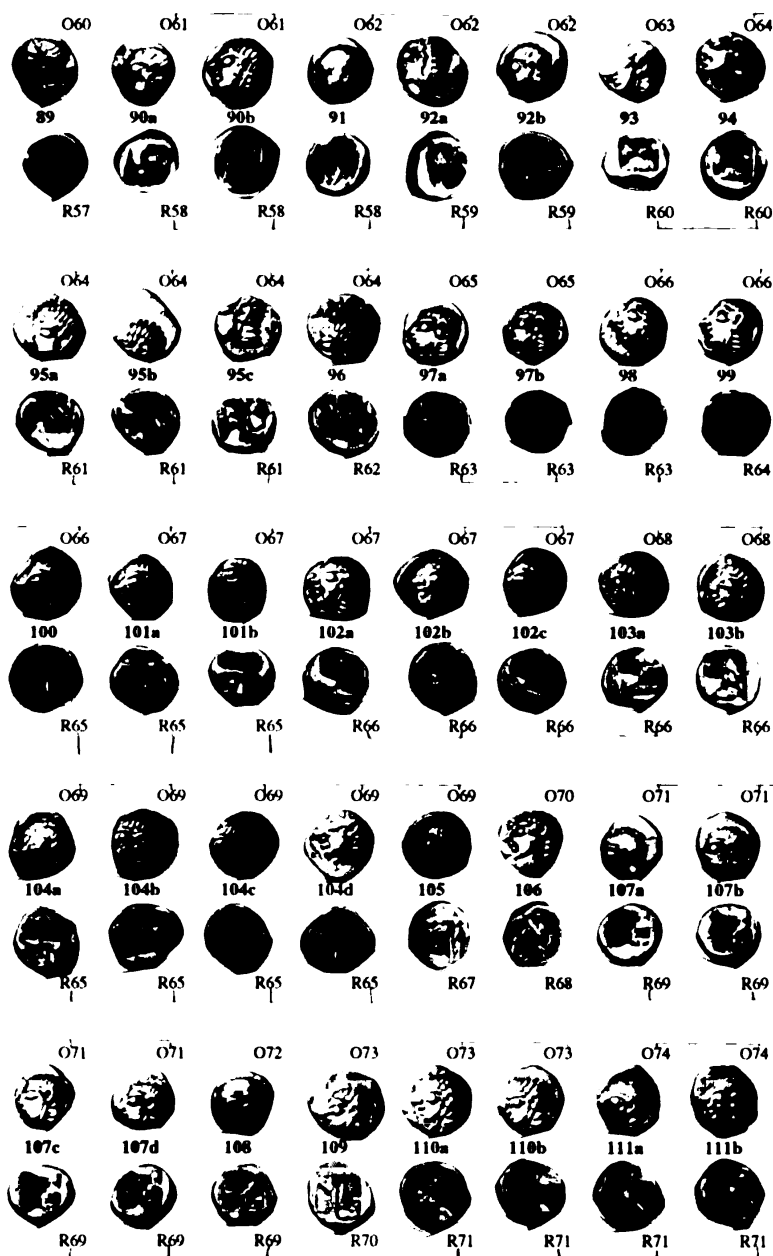


A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 18



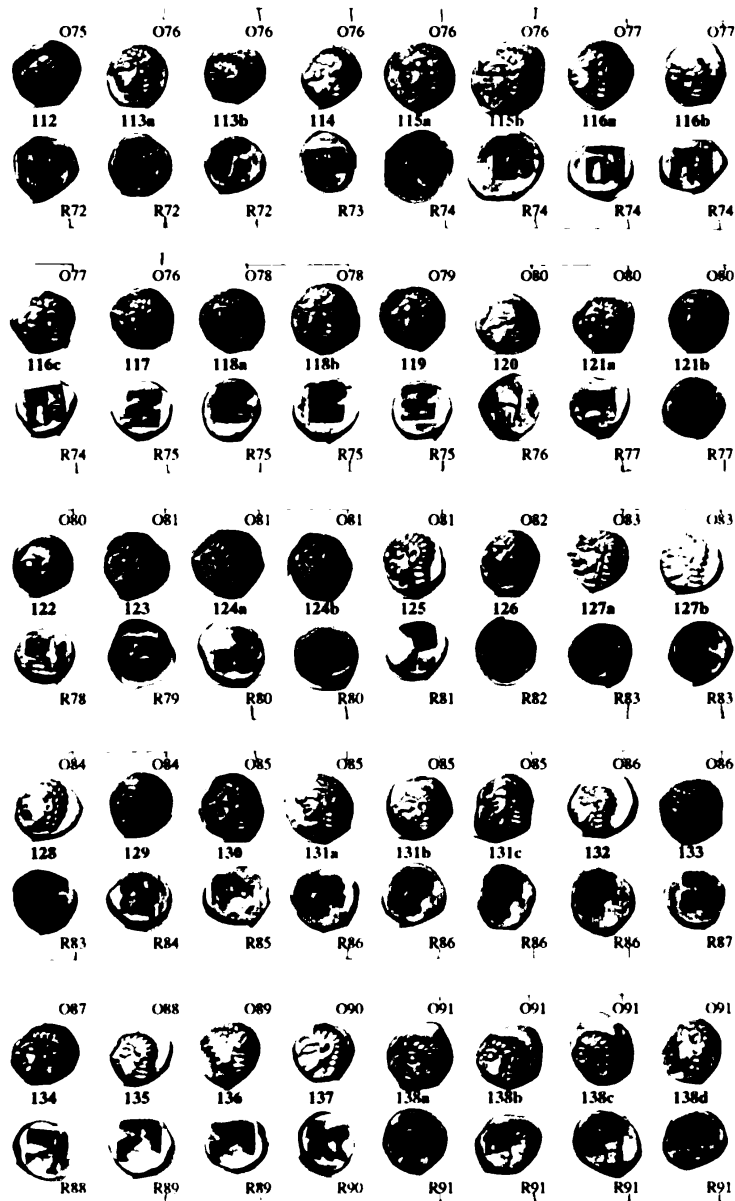
A Hoard of Archaic Coins of Colophon and Unminted Silver



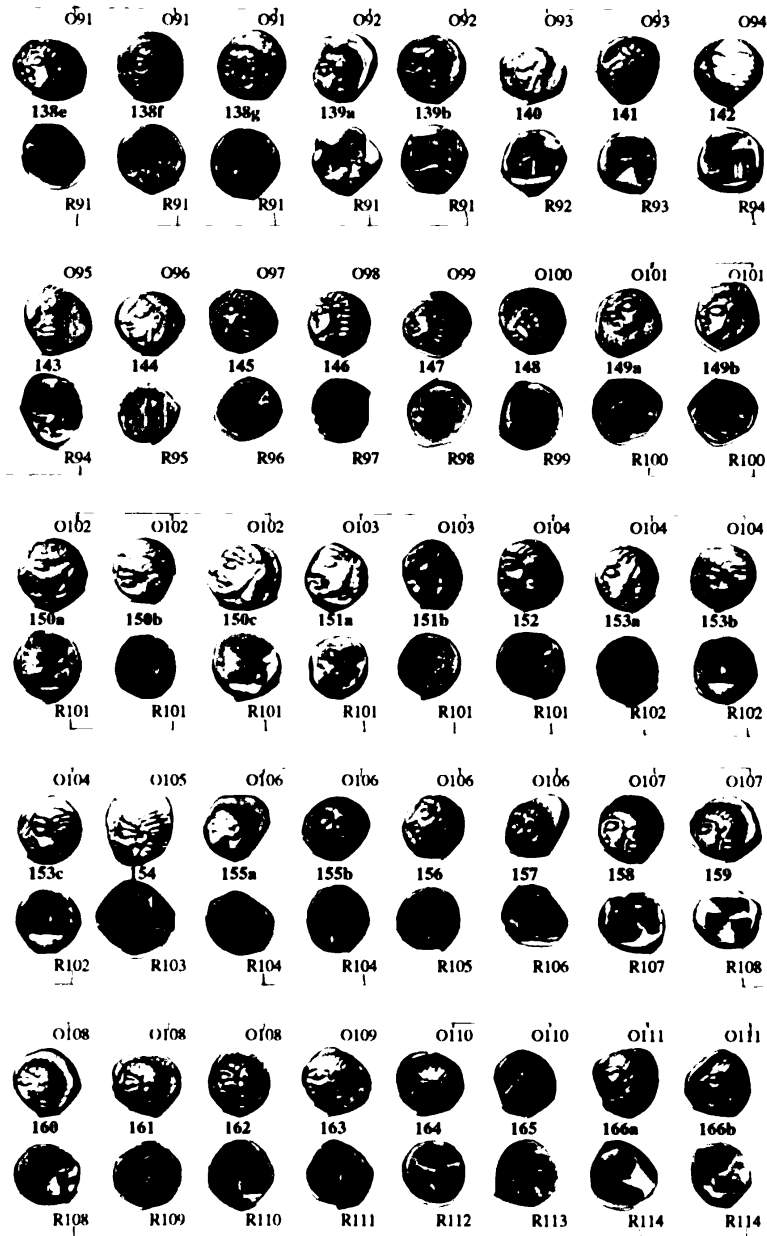
A Hoard of Archaic Coins of Colophon and Unminted Silver



Plate 20

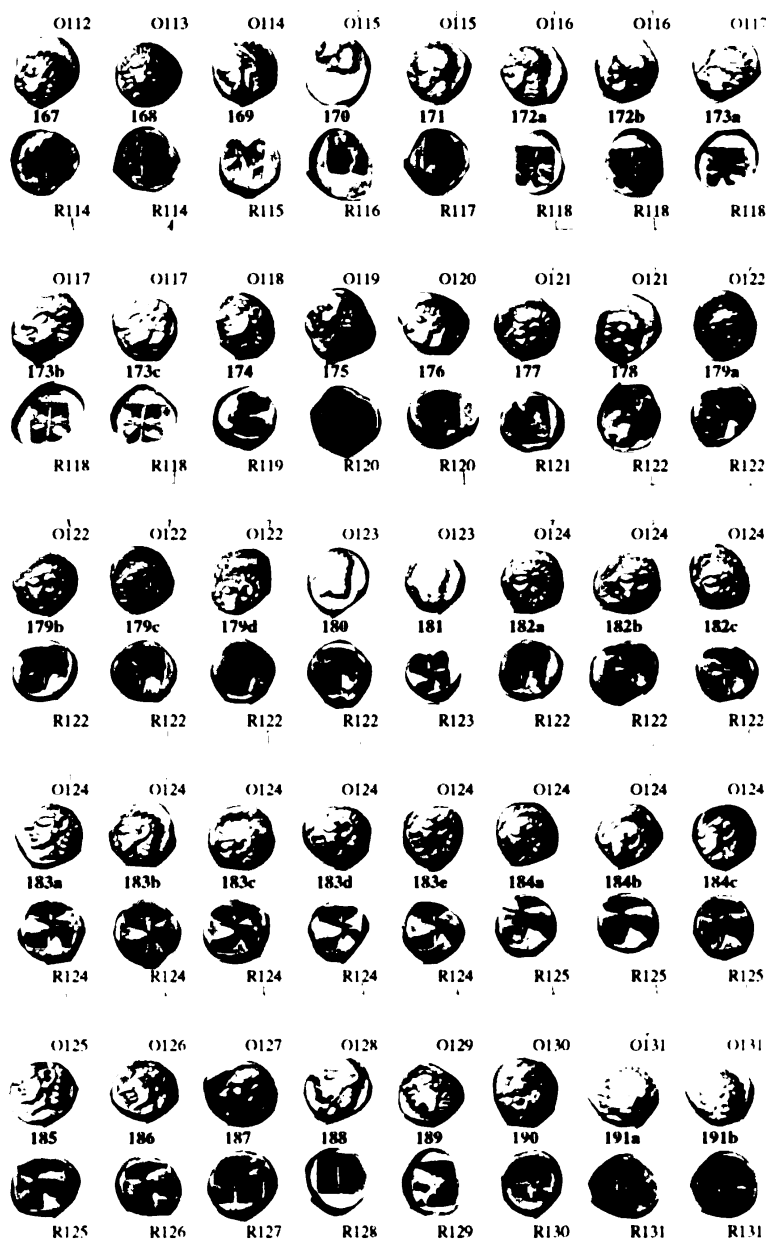


A Hoard of Archaic Coins of Colophon and Unminted Silver



A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 22

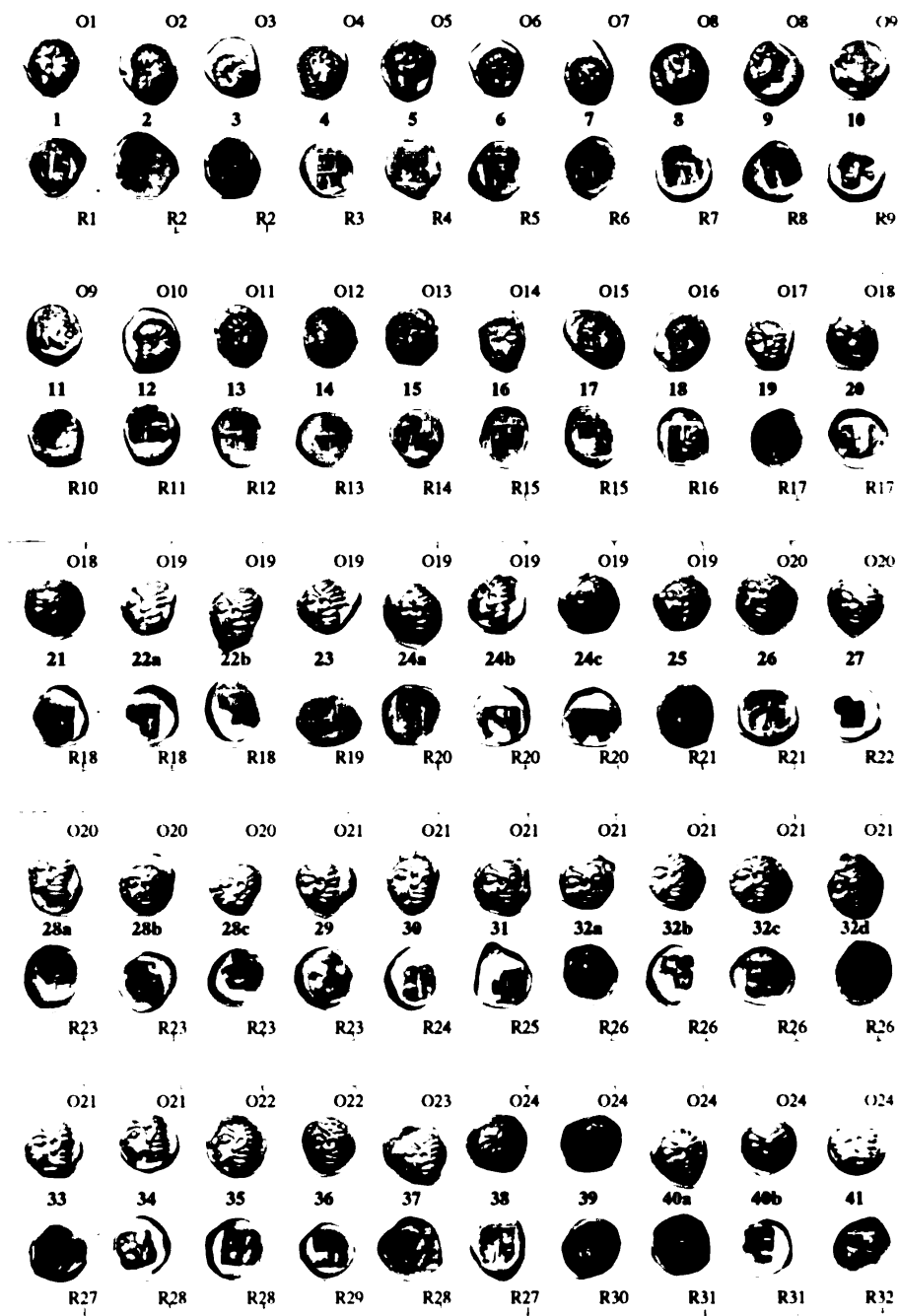


A Hoard of Archaic Coins of Colophon and Unminted Silver

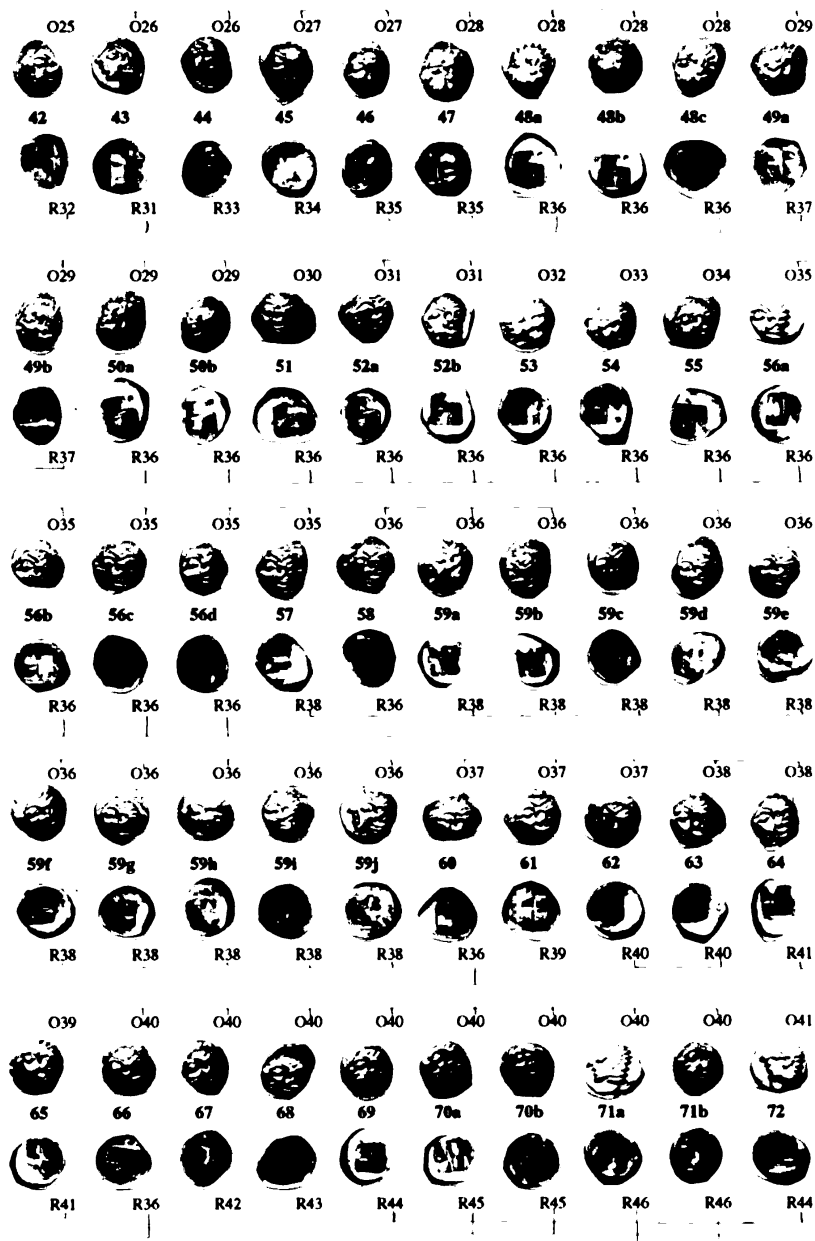


Plate 24

Forty-eights

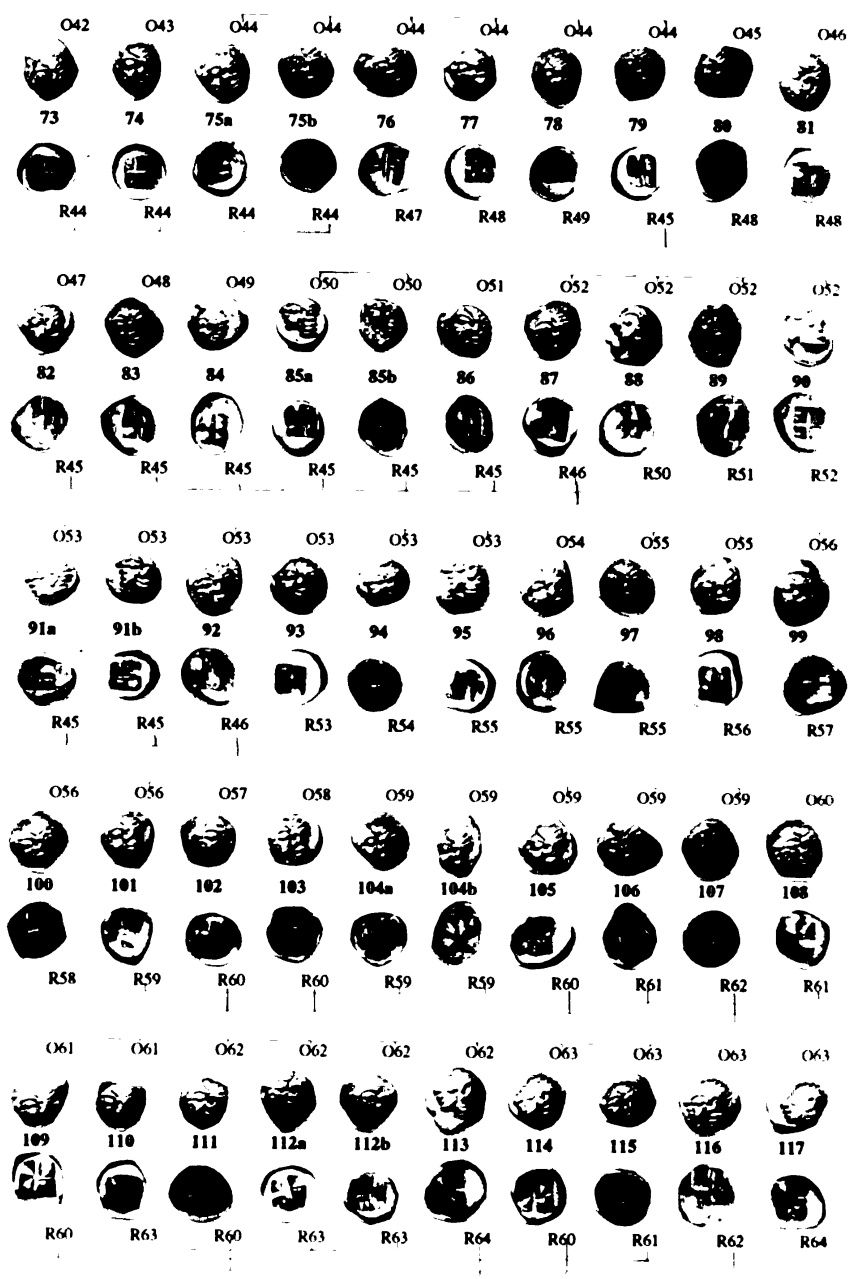


A Hoard of Archaic Coins of Colophon and Unminted Silver

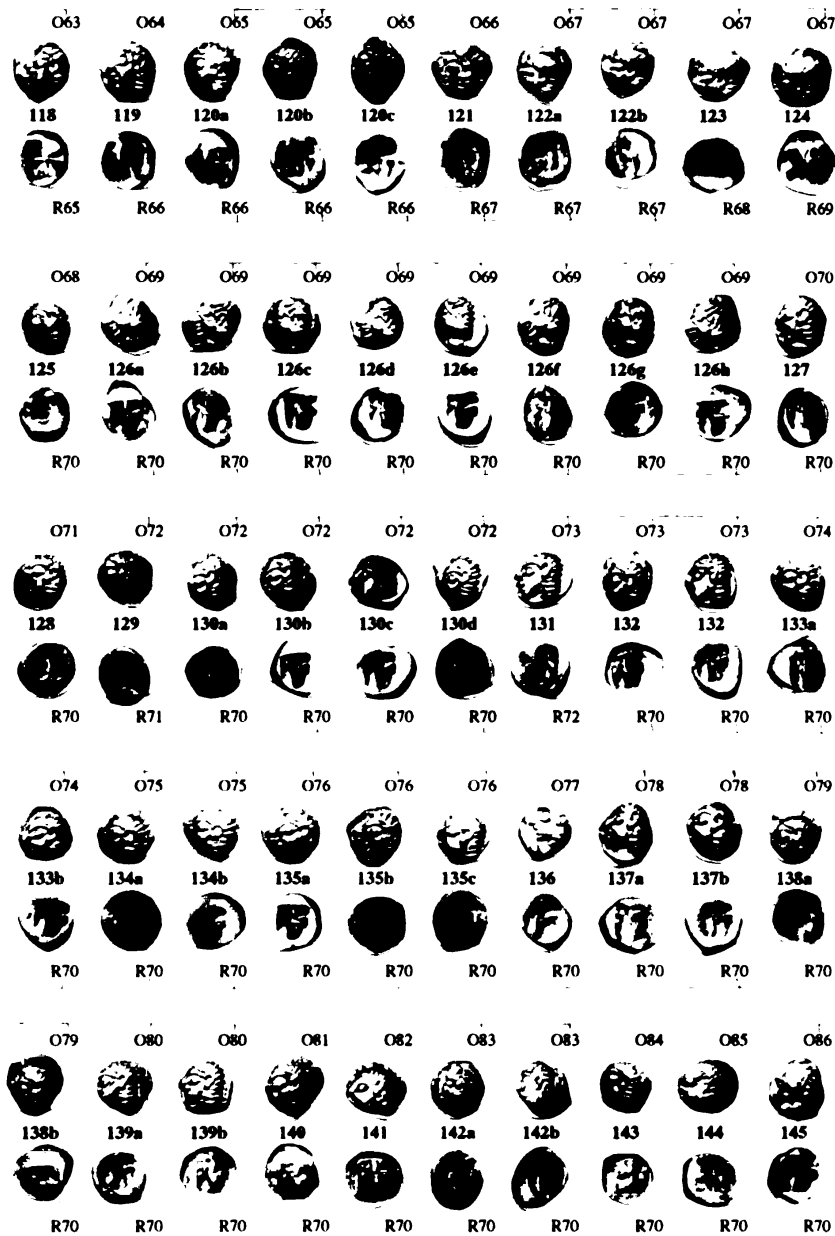


A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 26



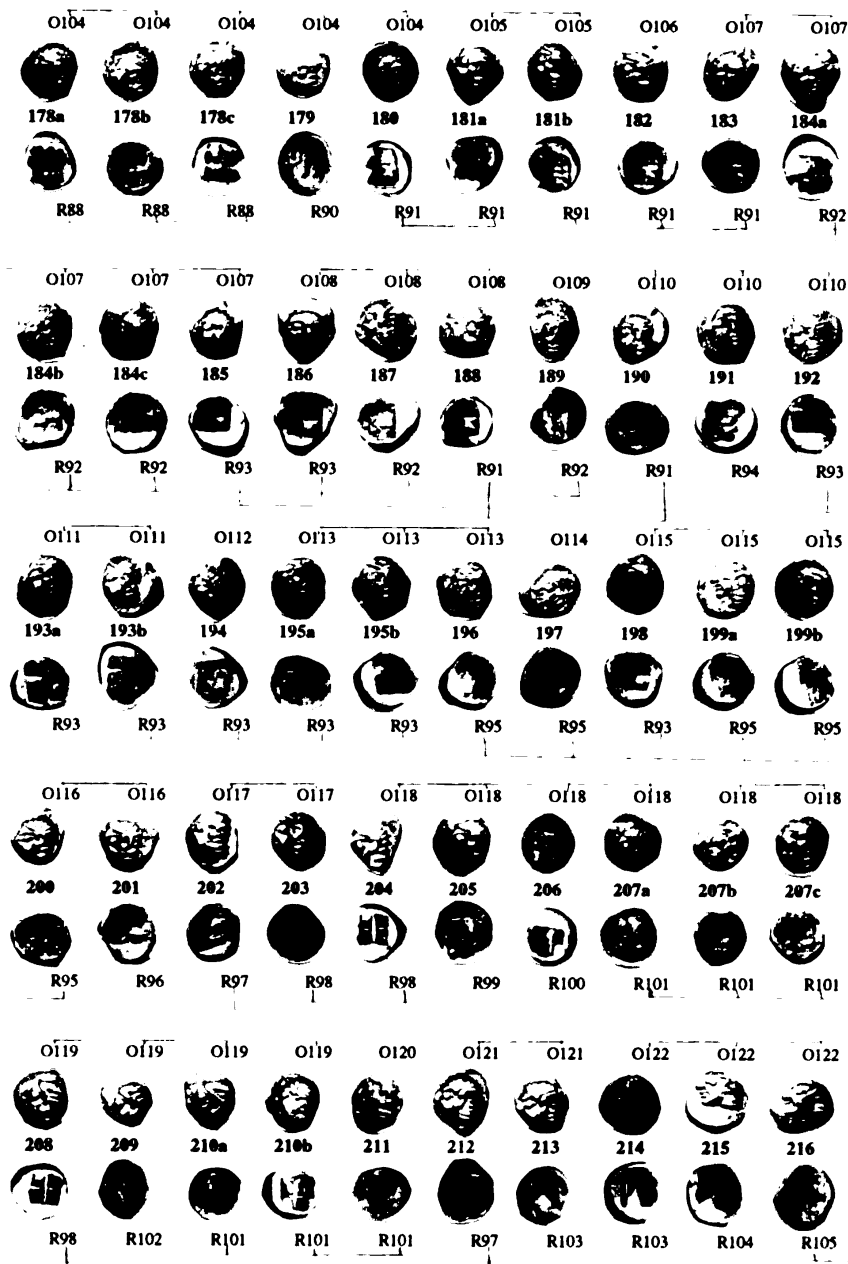
A Hoard of Archaic Coins of Colophon and Unminted Silver



A Hoard of Archaic Coins of Colophon and Unminted Silver

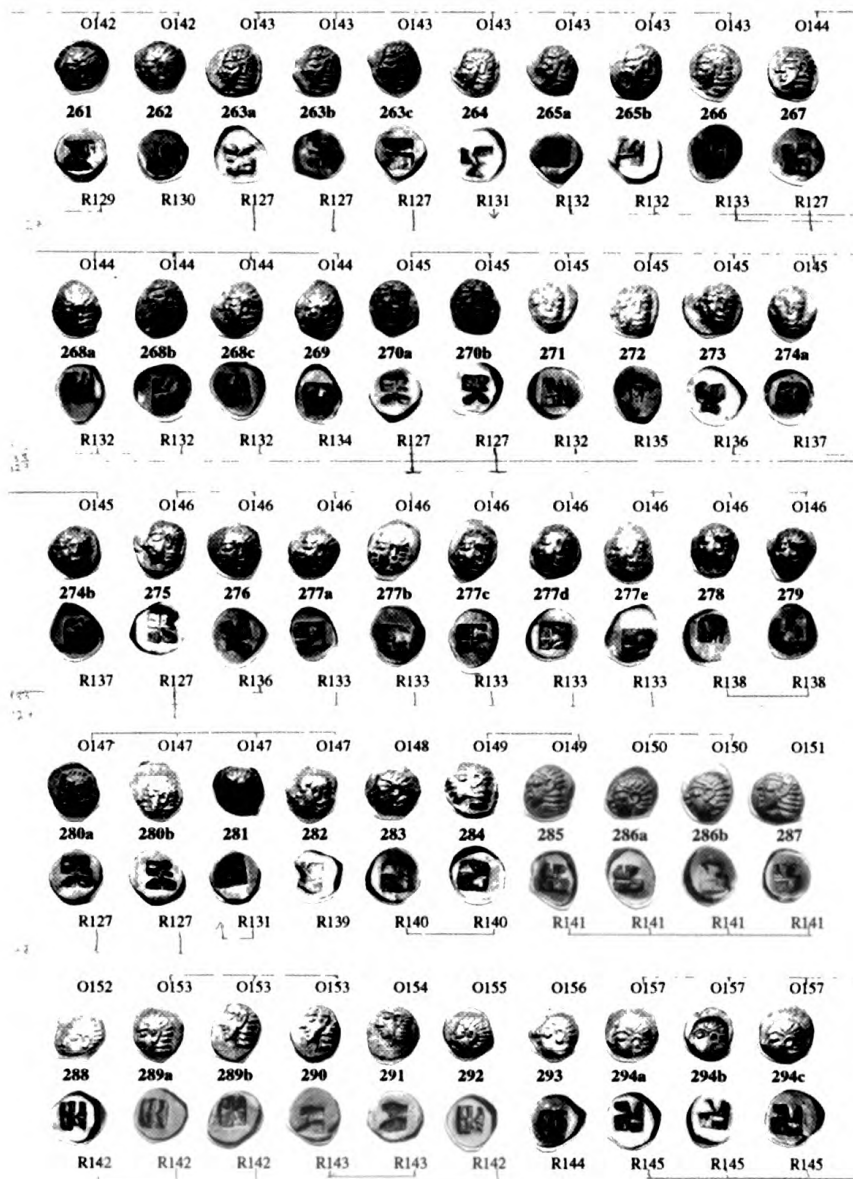






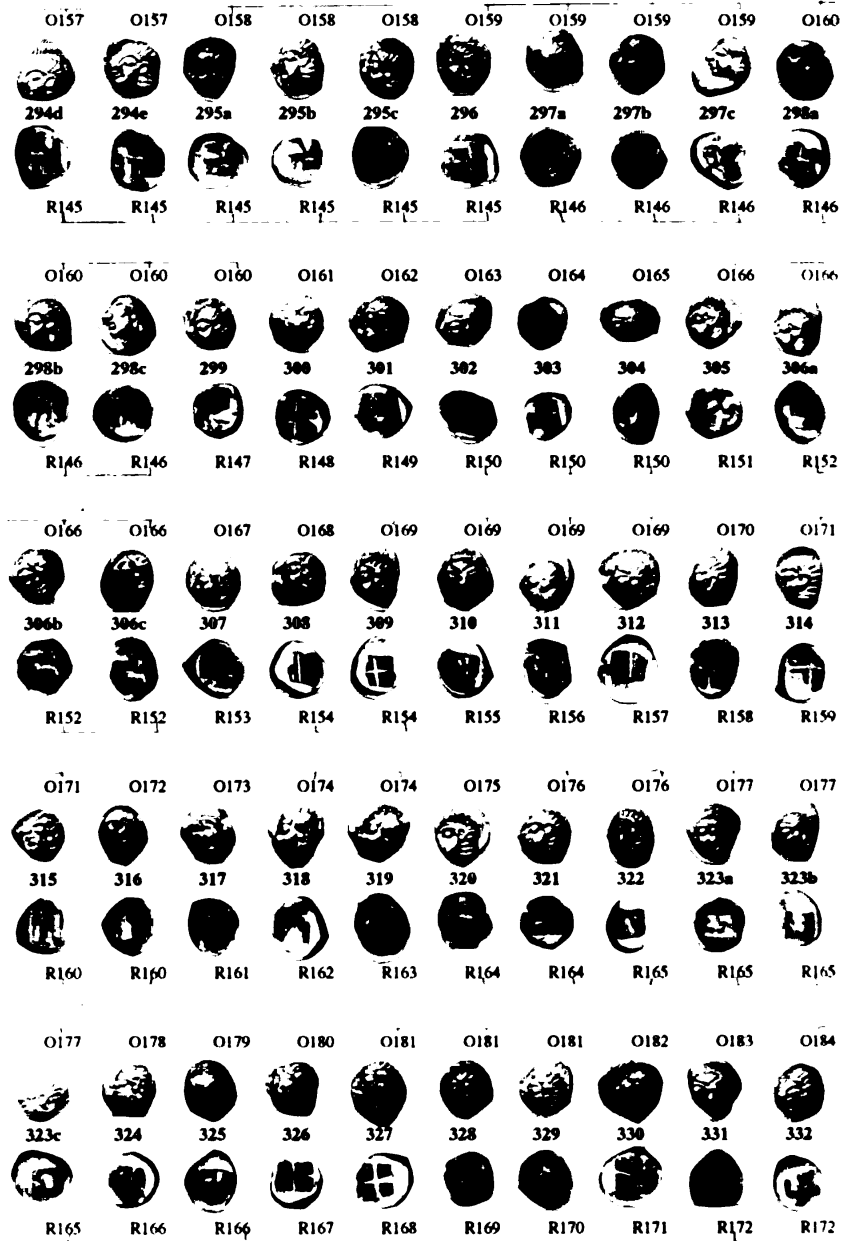
A Hoard of Archaic Coins of Colophon and Unminted Silver



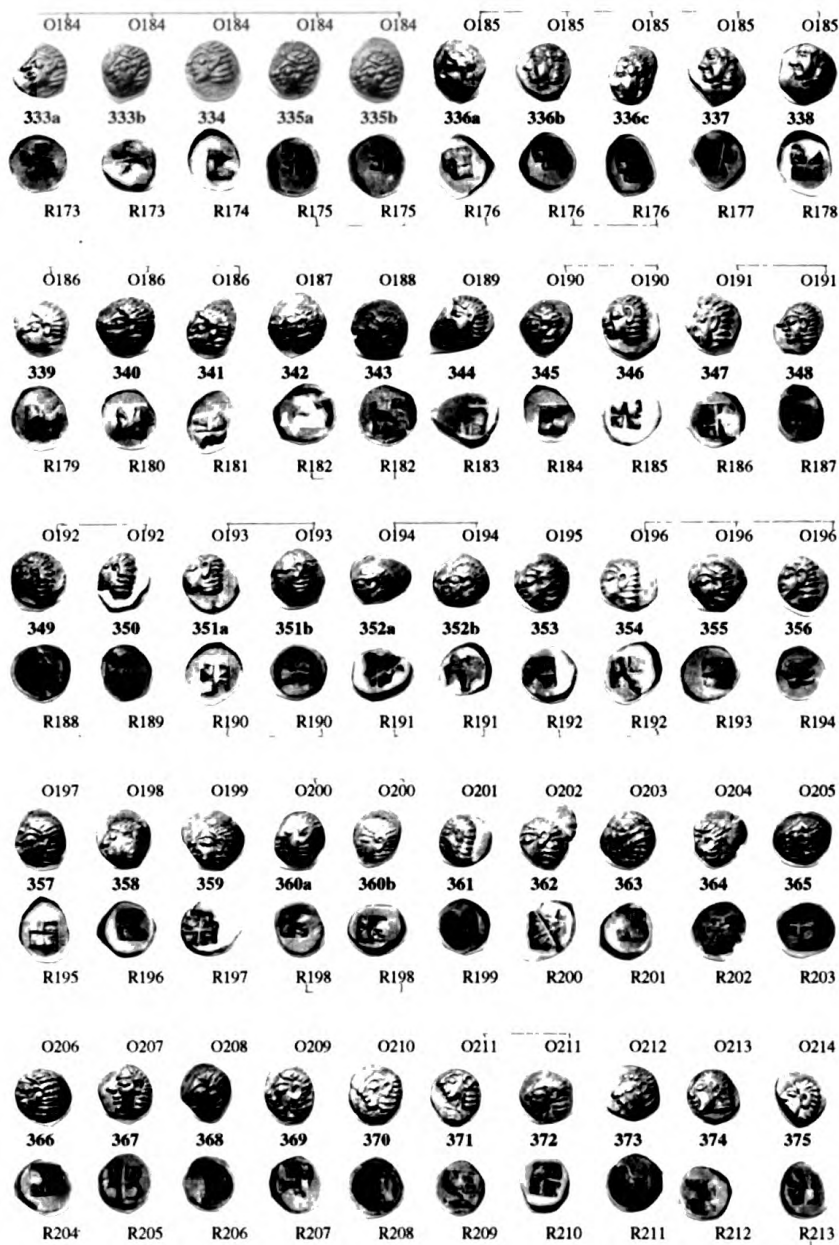


A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 32

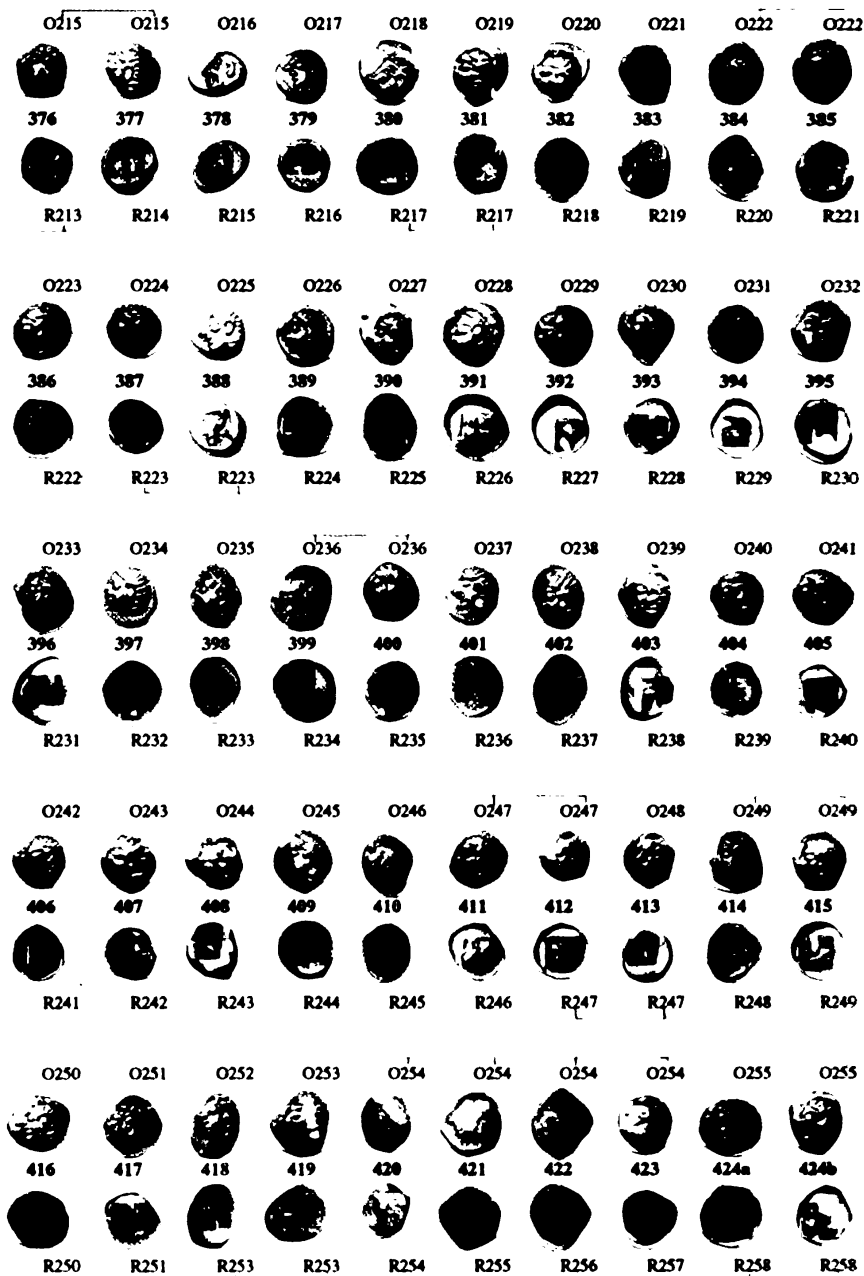


A Hoard of Archaic Coins of Colophon and Unminted Silver



A Hoard of Archaic Coins of Colophon and Unminted Silver

Plate 34



A Hoard of Archaic Coins of Colophon and Unminted Silver

Twelfth and selected twenty-fourths, enlarged

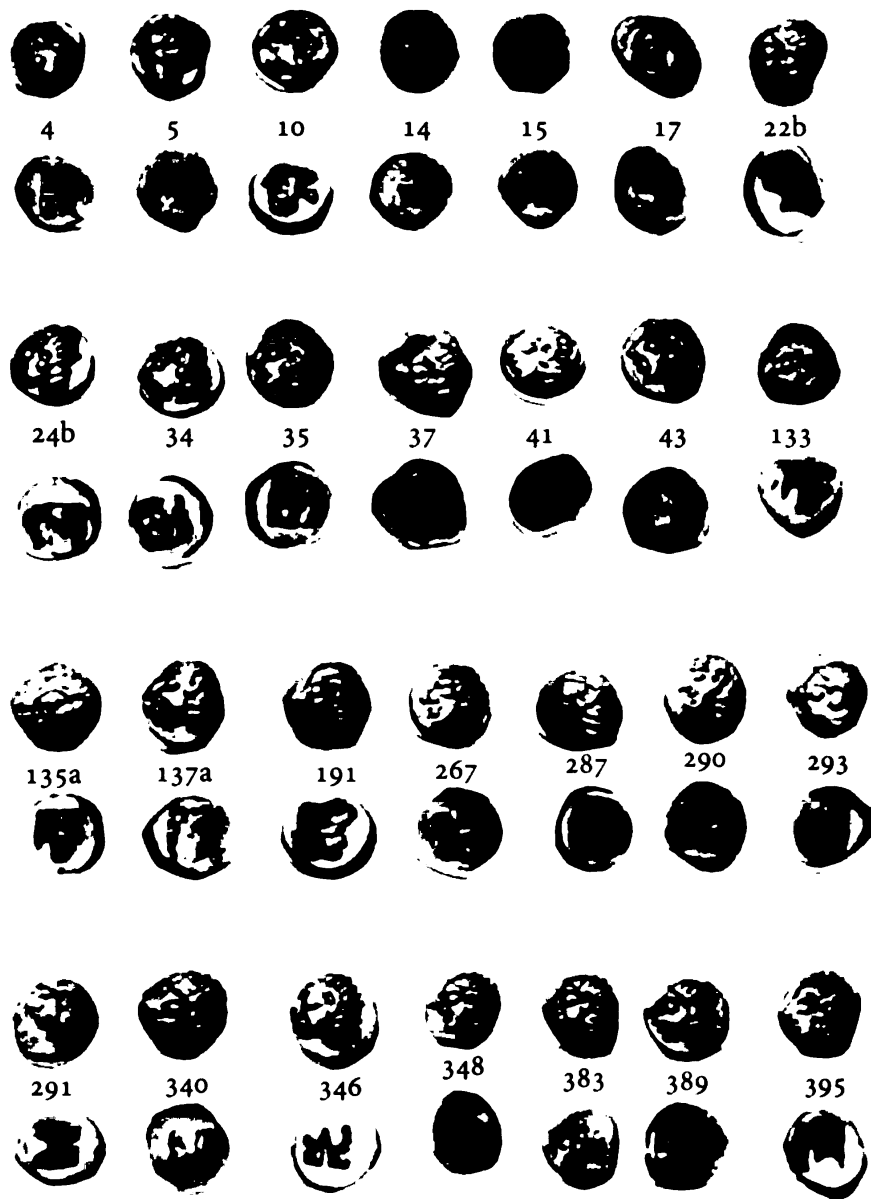


A Hoard of Archaic Coins of Colophon and Unminted Silver

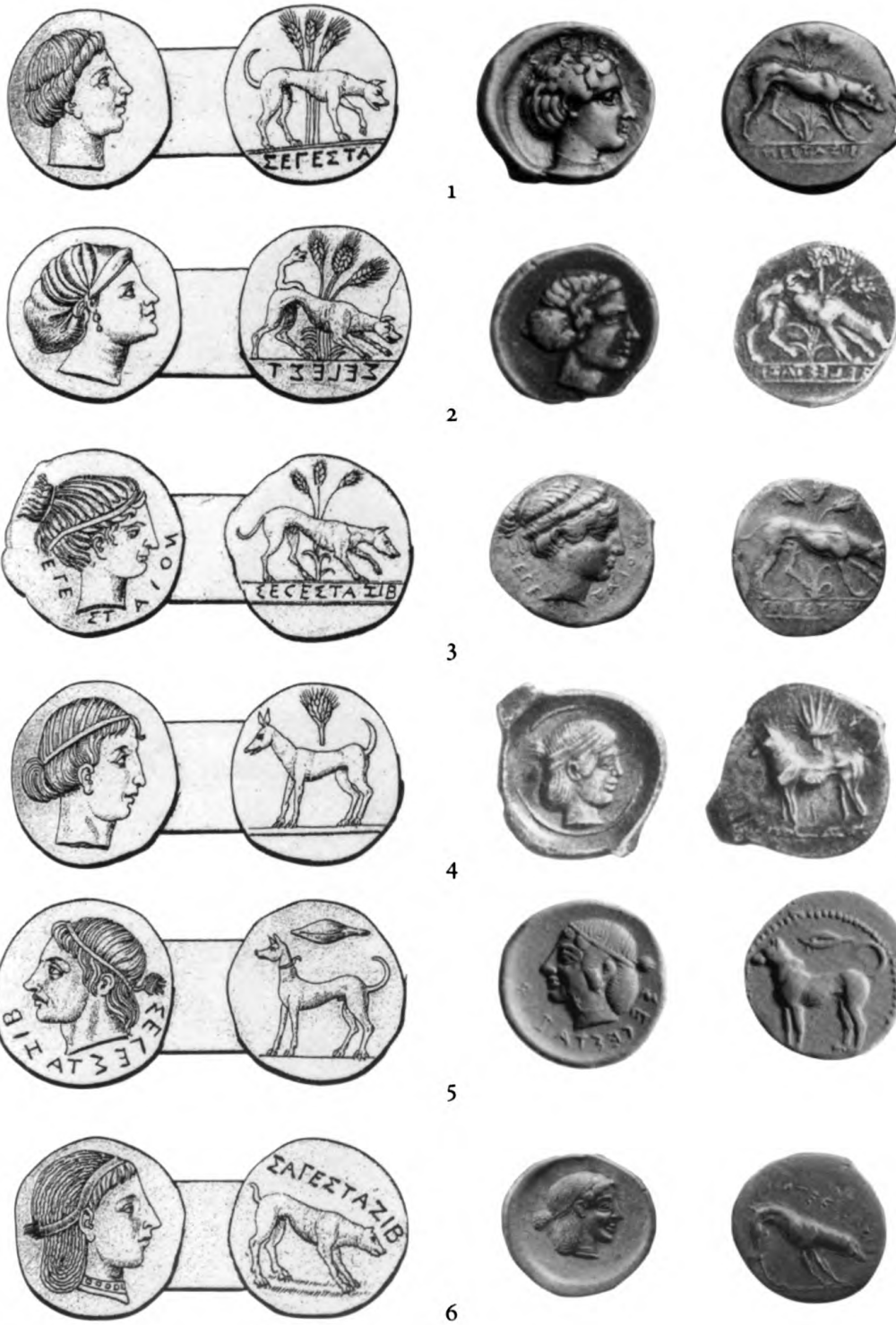


Plate 36

Selected forty-eighths, enlarged



A Hoard of Archaic Coins of Colophon and Unminted Silver



Torremuzza's SEGESTANORVM

Plate 38



7



8



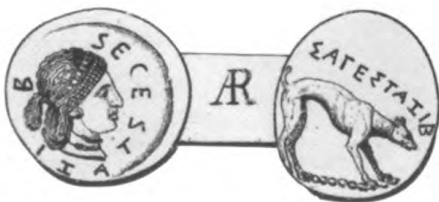
9



10



11



12



Torremuzza's SEGESTANORVM



13



14



15



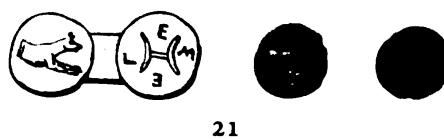
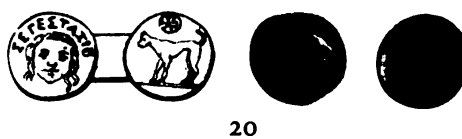
16



17

Torremuzza's SEGESTANORVM

Plate 40



Torremuzza's SEGESTANORVM



Thessalian Hoards and the Coinage of Larissa

Plate 42



Thessalian Hoards and the Coinage of Larissa

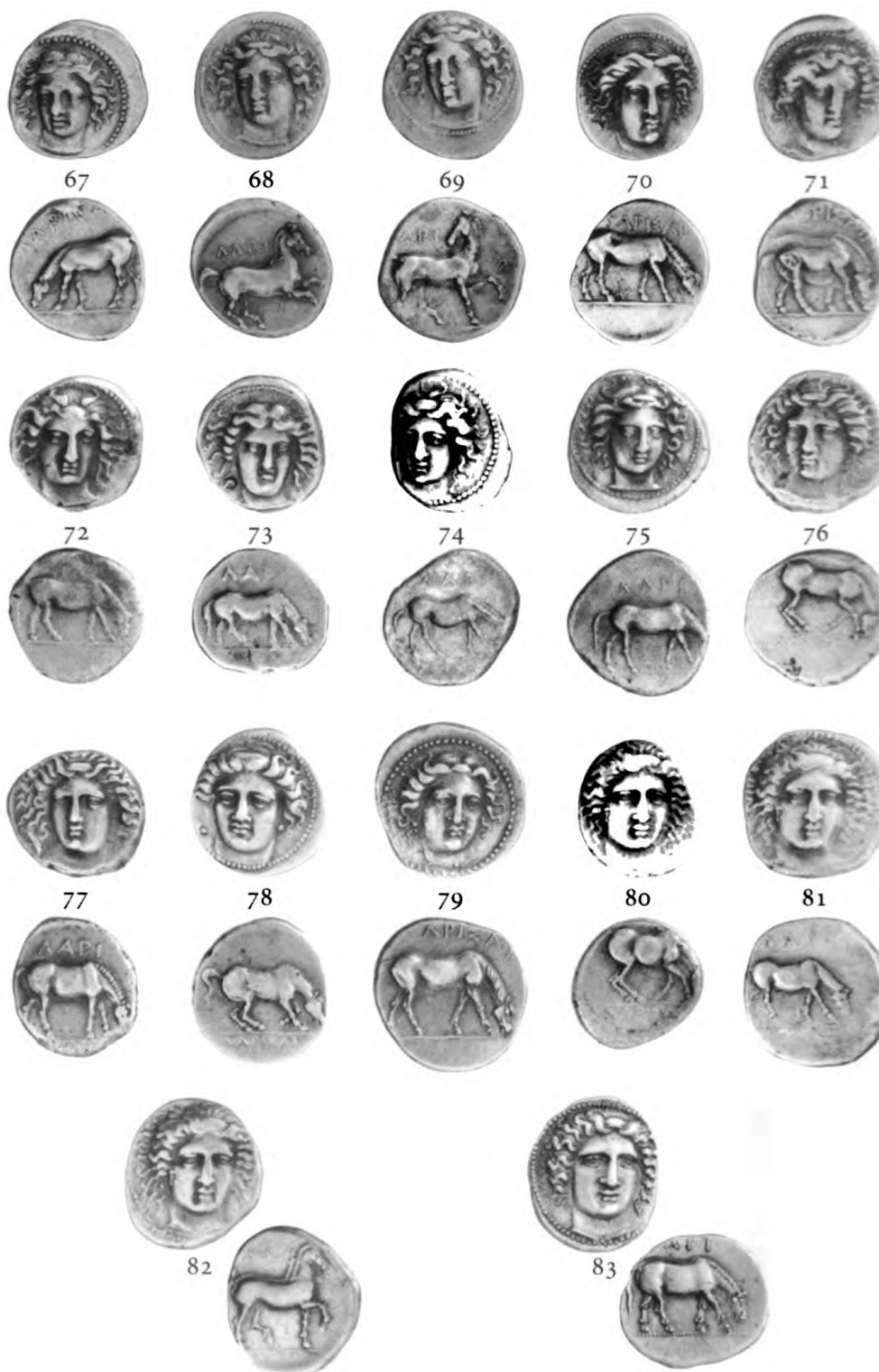




Thessalian Hoards and the Coinage of Larissa



Plate 44



Thessalian Hoards and the Coinage of Larissa



Thessalian Hoards and the Coinage of Larissa

Plate 46



Thessalian Hoards and the Coinage of Larissa



A Fourth Century BCE Hoard from the Near East

Plate 48



A Fourth Century BCE Hoard from the Near East



A Fourth Century BCE Hoard from the Near East



Plate 50



A Fourth Century BCE Hoard from the Near East



A Fourth Century BCE Hoard from the Near East



Plate 52



A Fourth Century BCE Hoard from the Near East



A Fourth Century BCE Hoard from the Near East

Plate 54



A Fourth Century BCE Hoard from the Near East



A Fourth Century BCE Hoard from the Near East

Plate 56



A Fourth Century BCE Hoard from the Near East



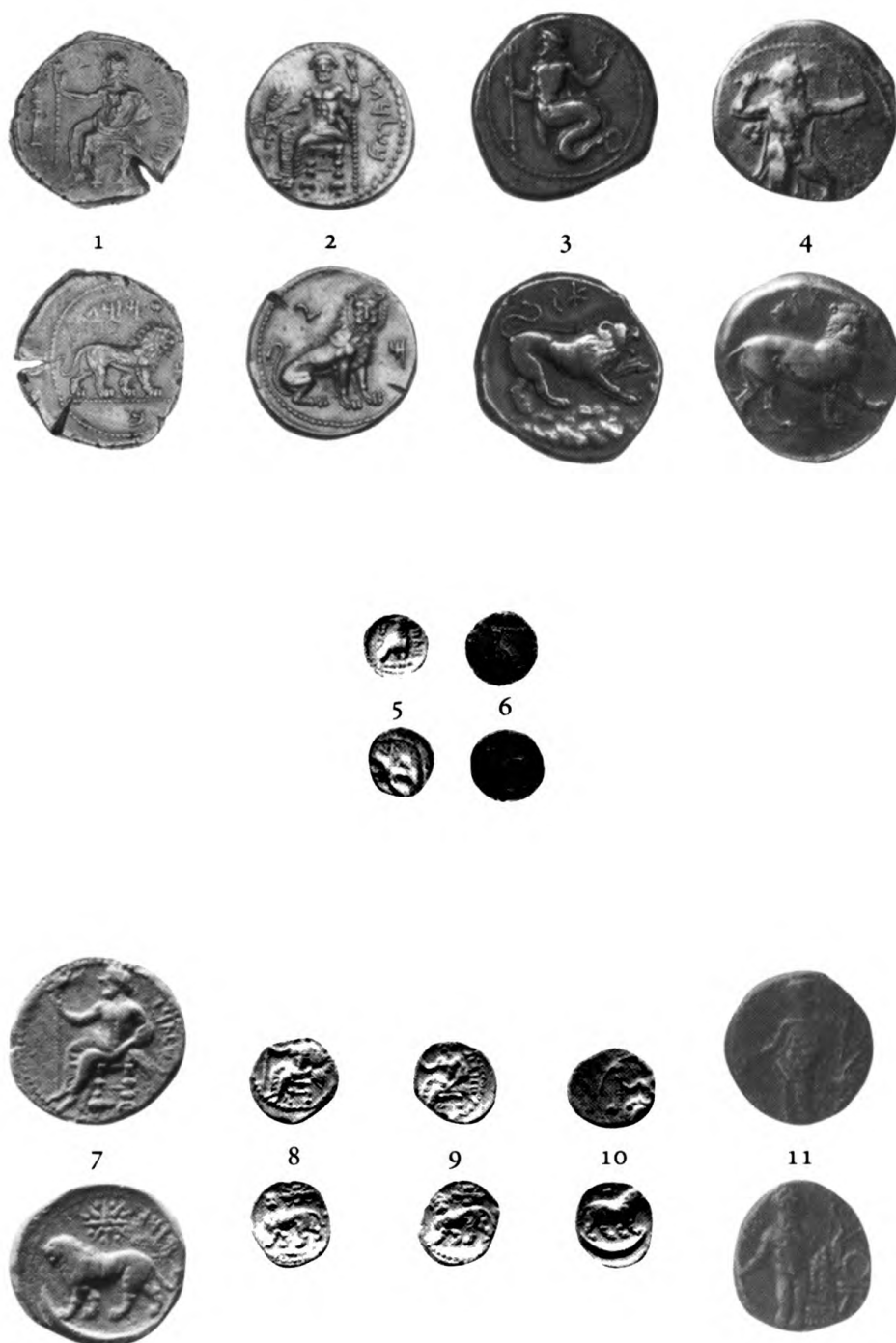
A Fourth Century BCE Hoard from the Near East



Plate 58



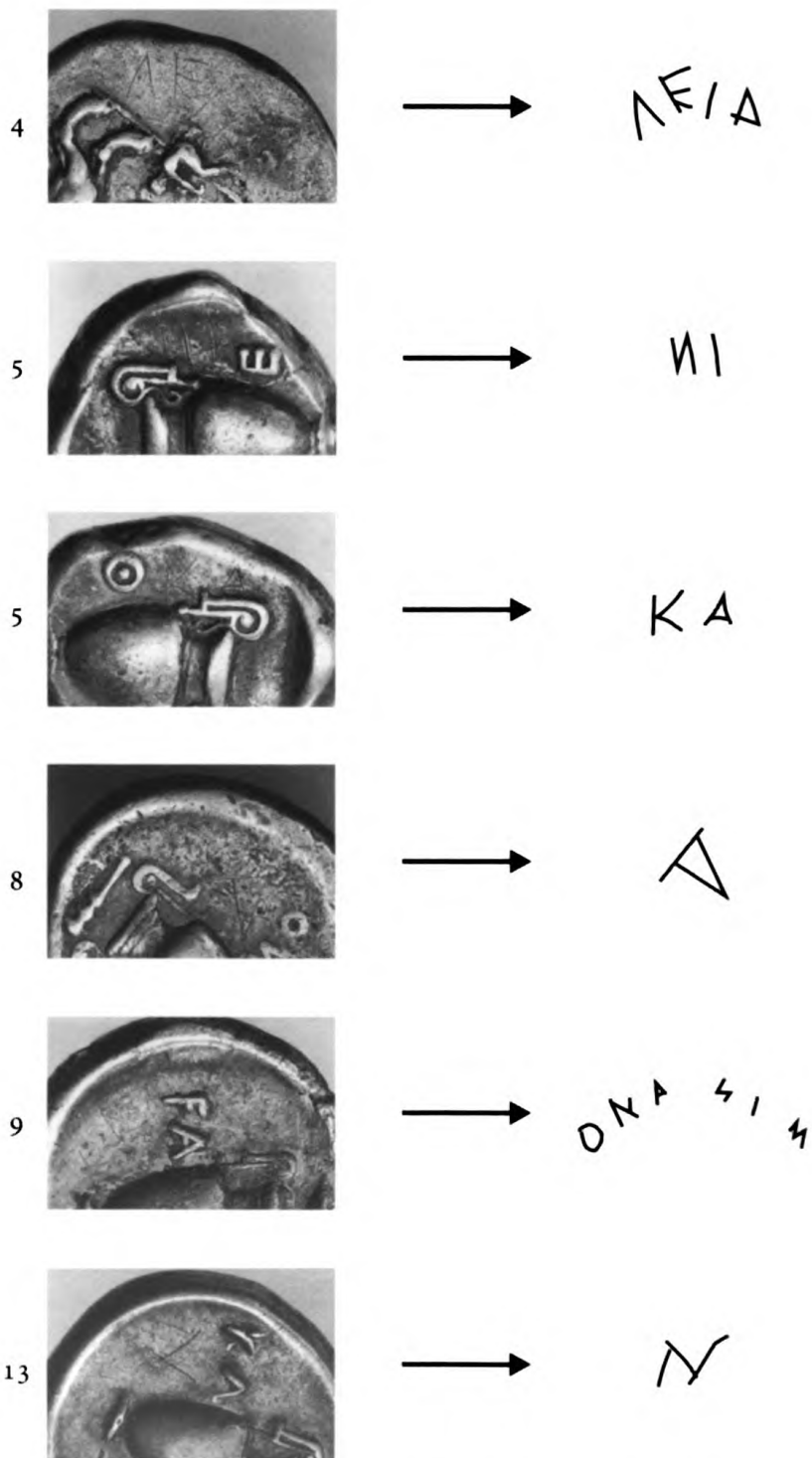
A Fourth Century BCE Hoard from the Near East



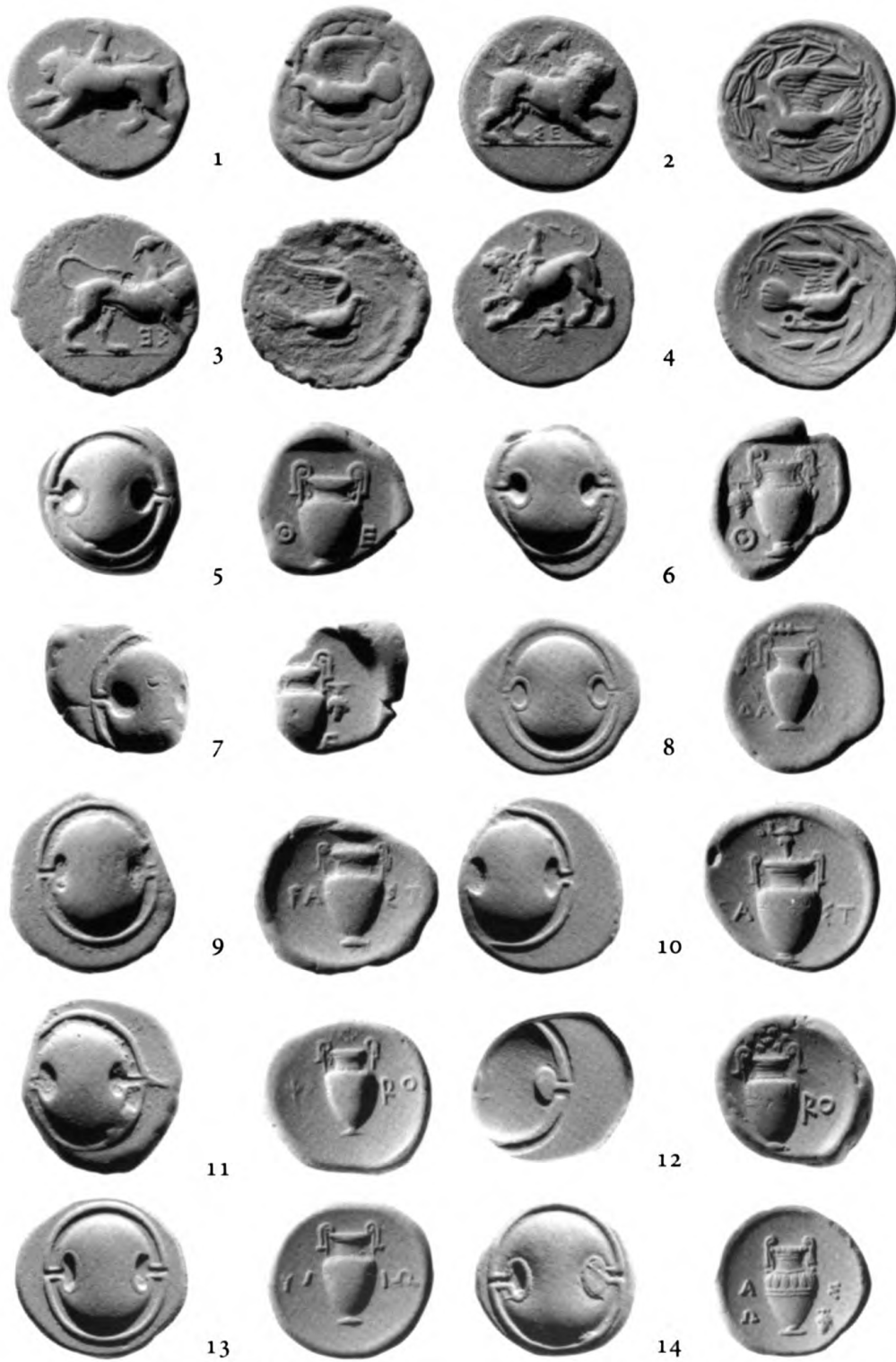
The Later Fourth Century BCE Coinage of Issos



Plate 60

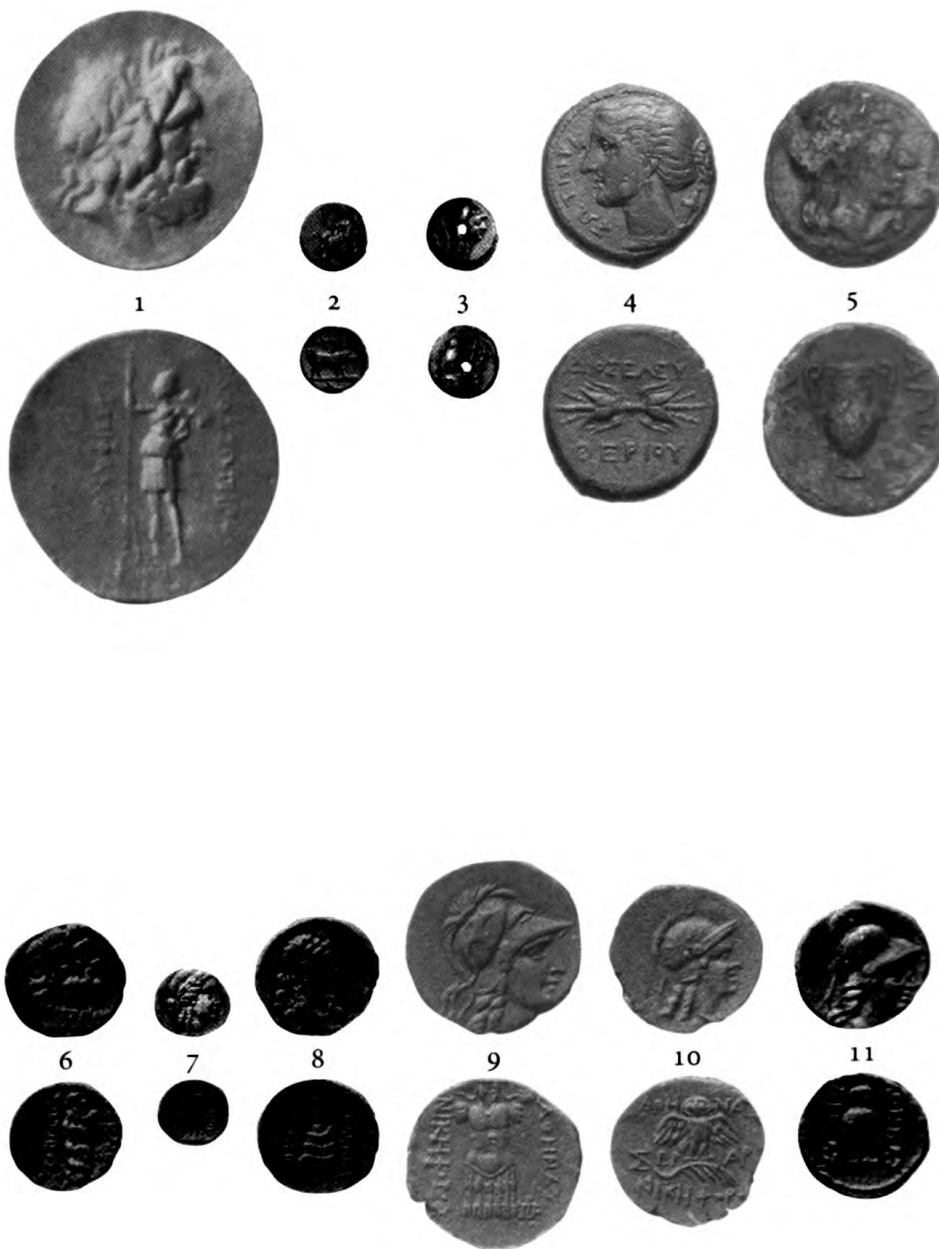


NIKA, ΑΕΙΑ: Graffiti on Sicyonian and Theban Staters



NIKA, AEIA: Graffiti on Sicyonian and Theban Staters

Plate 62



*Panegyris Coinage*



12



13



14

15

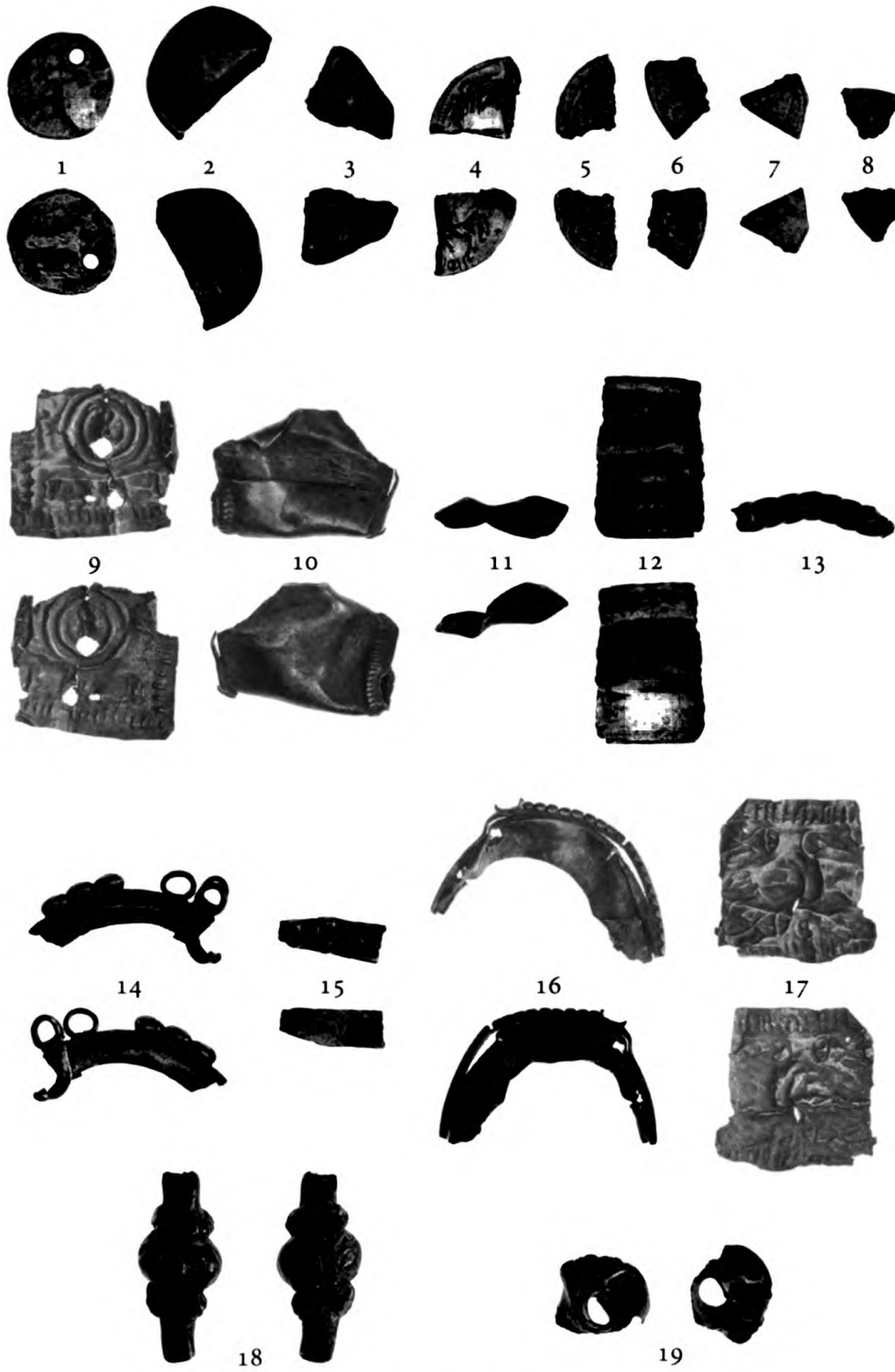
16

*Panegyris Coinage*

Plate 64



*Panegyris Coinage*

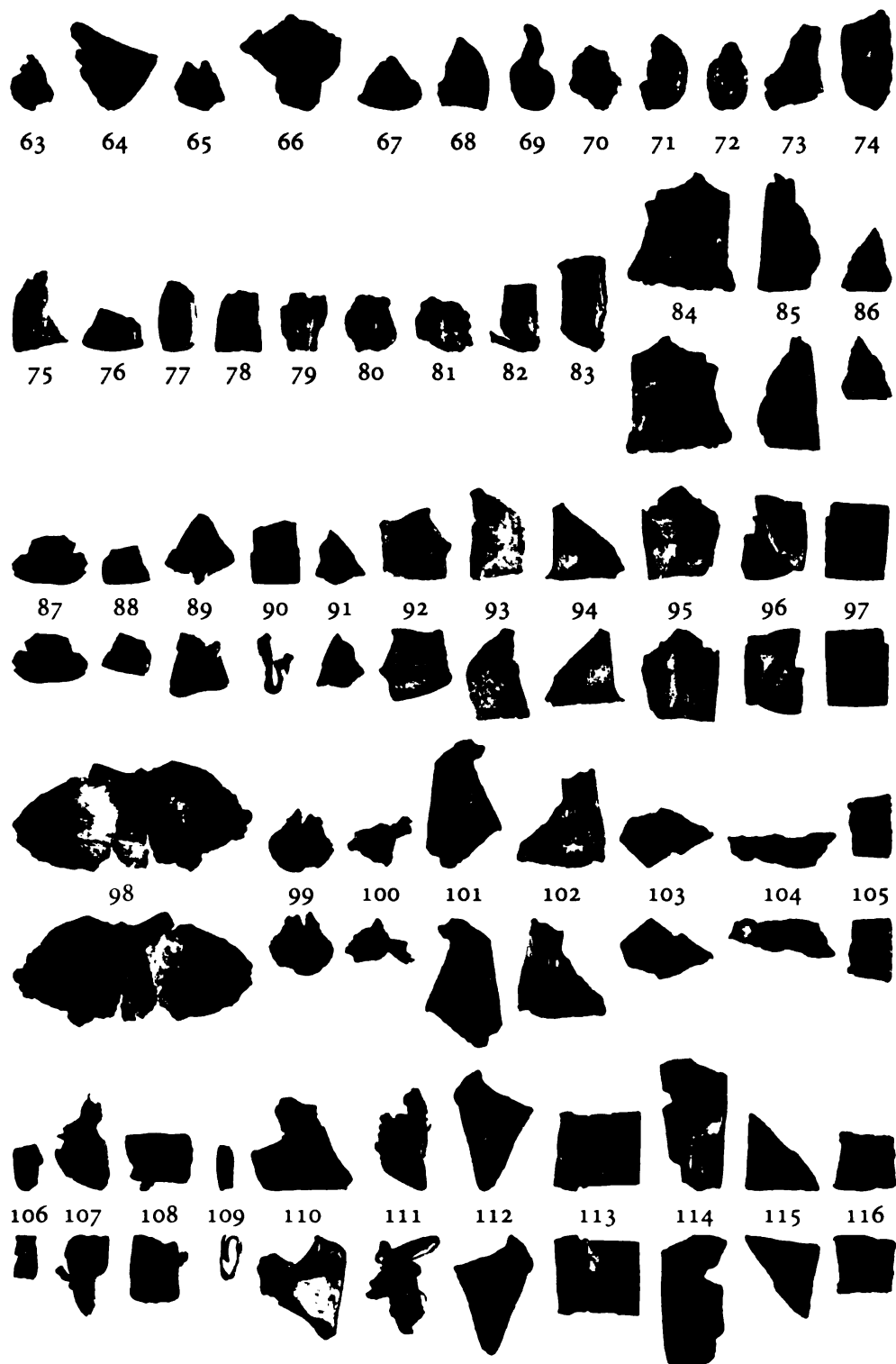


A New Celtiberian Hacksilber Hoard, c. 200 BCE

Plate 66



A New Celtiberian Hacksilber Hoard, c. 200 BCE



A New Celtiberian Hacksilber Hoard, c. 200 BCE



Plate 68



The hoard en masse

A New Celtiberian Hacksilber Hoard, c. 200 BCE



The Bronze Coinage of Trye: The First Years of Autonomy

Plate 70



5a



5b



5c



5d

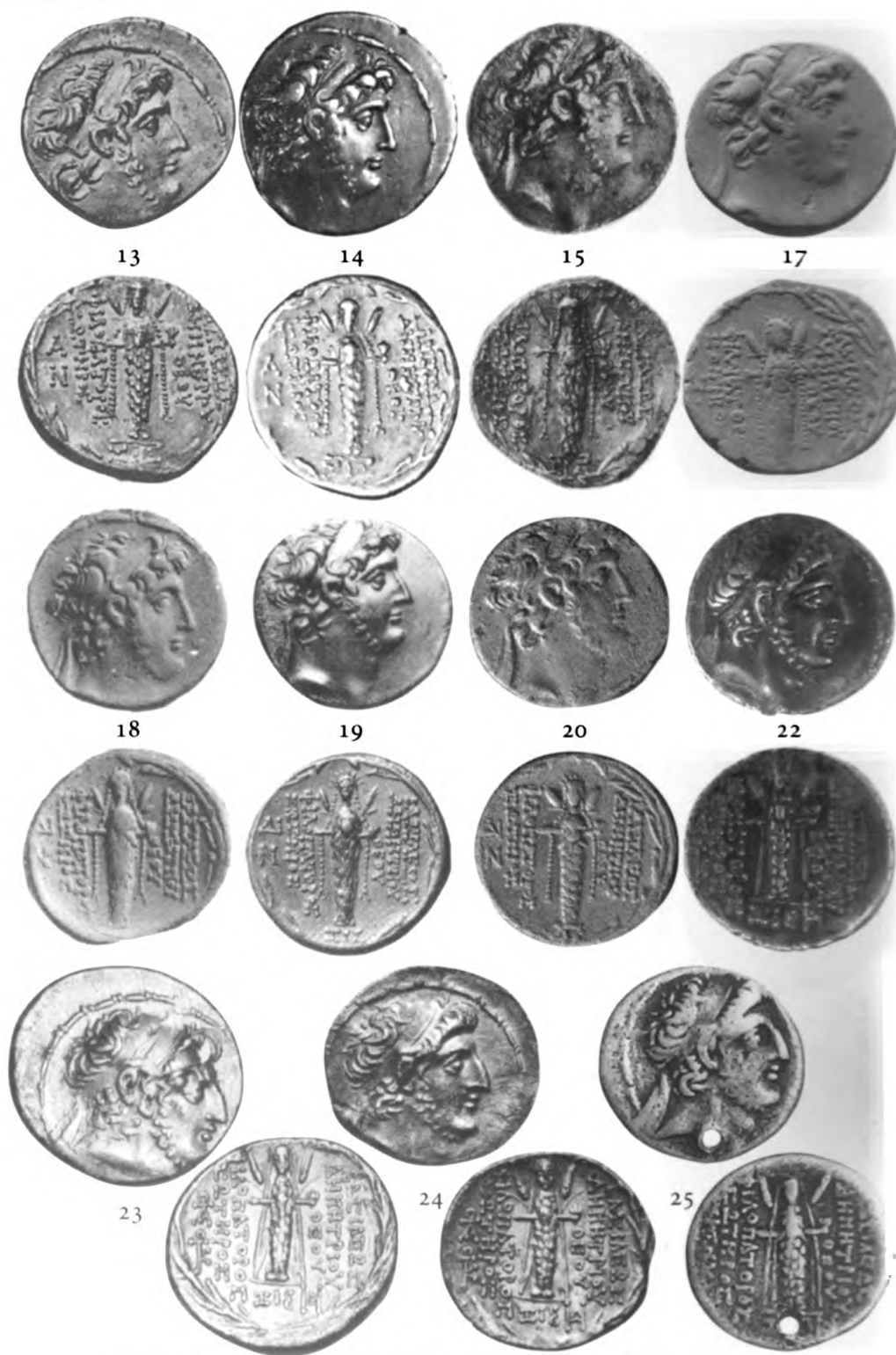
The Bronze Coinage of Trye: The First Years of Autonomy

Demetrius III

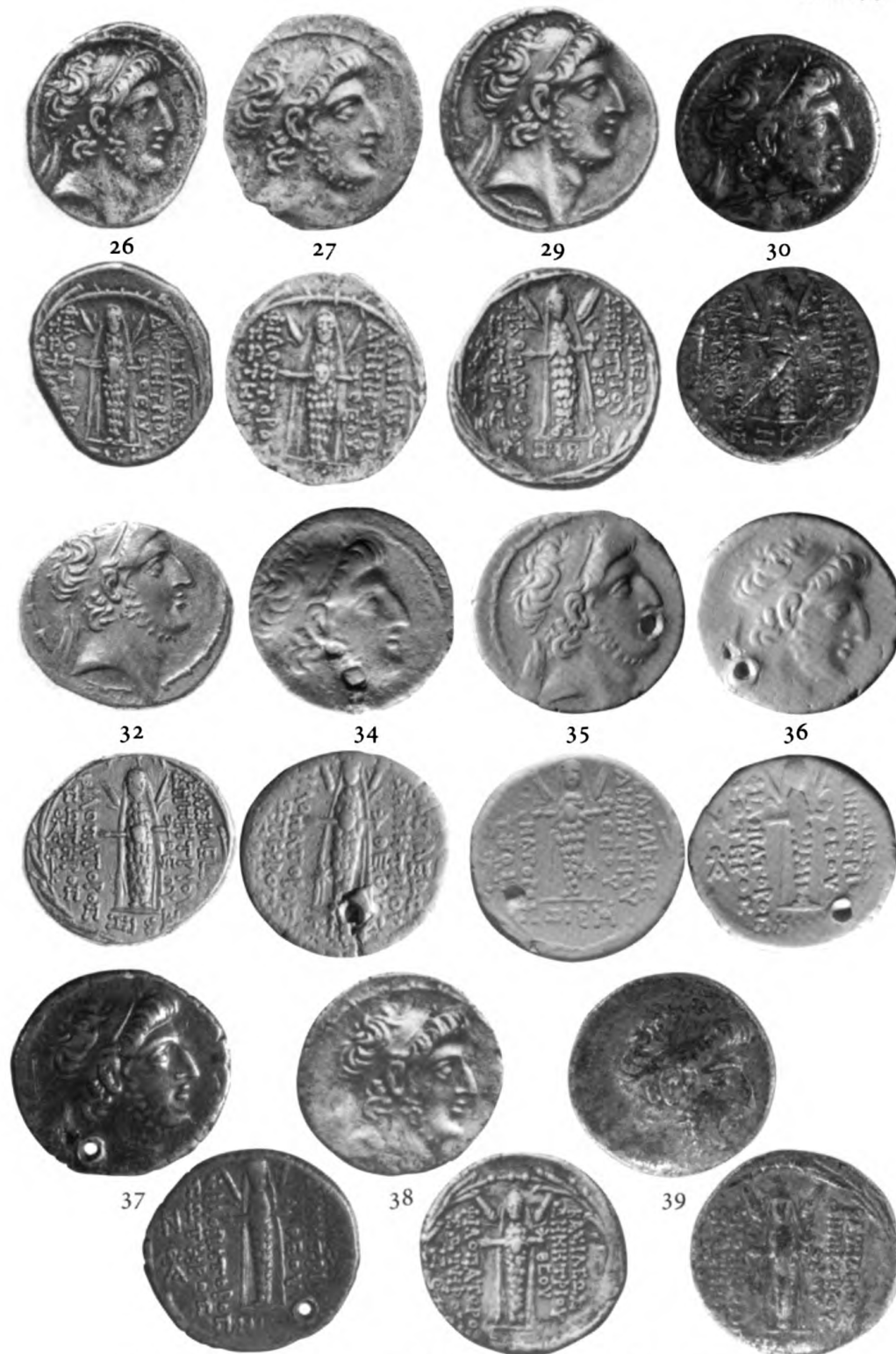


Silver Mint of Damascus under Demetrius III and Antiochus XII

Plate 72



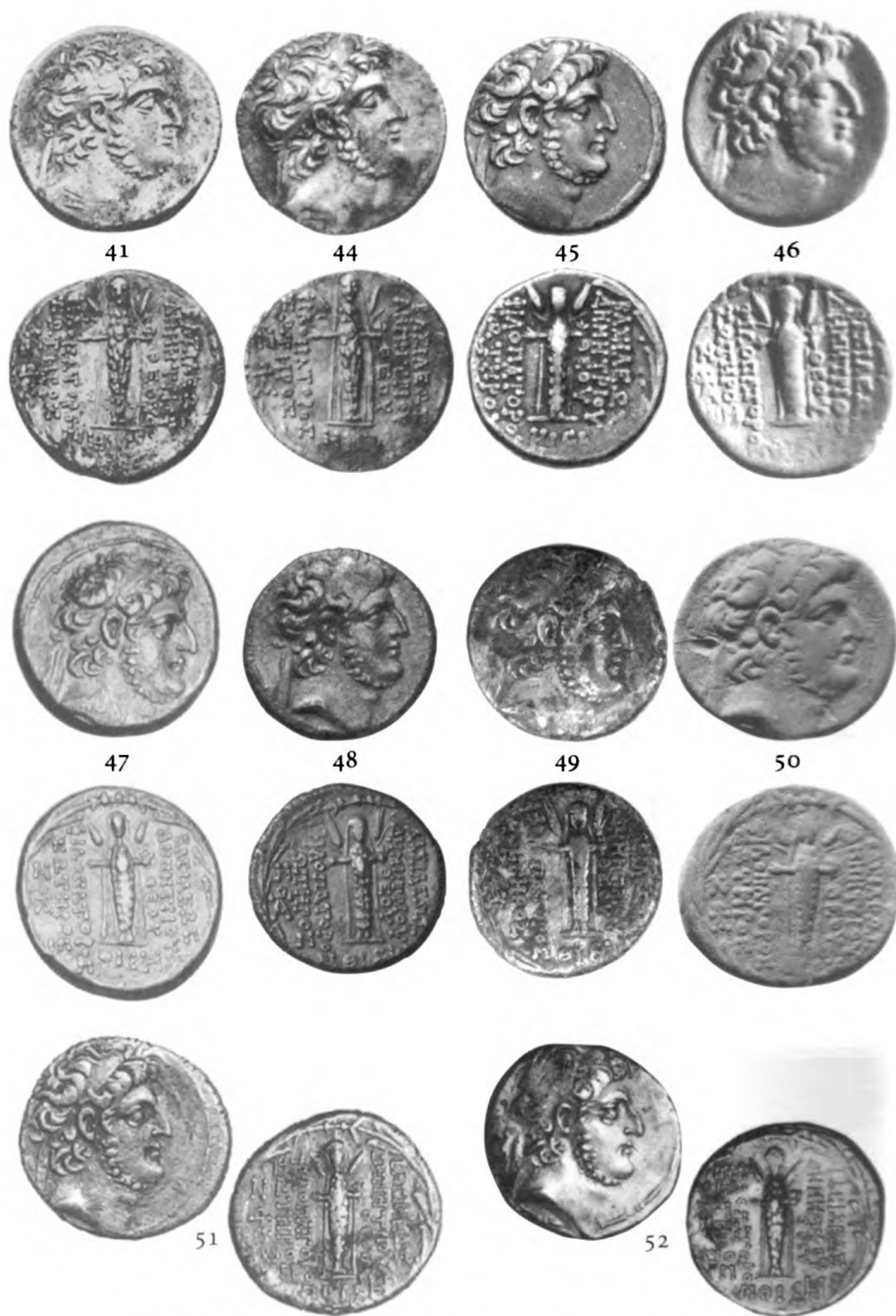
Silver Mint of Damascus under Demetrius III and Antiochus XII



Silver Mint of Damascus under Demetrius III and Antiochus XII



Plate 74



Silver Mint of Damascus under Demetrius III and Antiochus XII



Silver Mint of Damascus under Demetrius III and Antiochus XII



Plate 76



Silver Mint of Damascus under Demetrius III and Antiochus XII



79



80



81



82



83



84



85



86



87



Silver Mint of Damascus under Demetrius III and Antiochus XII

Plate 78



Silver Mint of Damascus under Demetrius III and Antiochus XII



Drachms

Hemidrachms



Silver Mint of Damascus under Demetrius III and Antiochus XII

Plate 80

Antiochus XII



Silver Mint of Damascus under Demetrius III and Antiochus XII



Tigranes IV, V, and VI: New Attributions



Plate 82



14a



15a



16a



16a (2x)



17a



17a (2x)



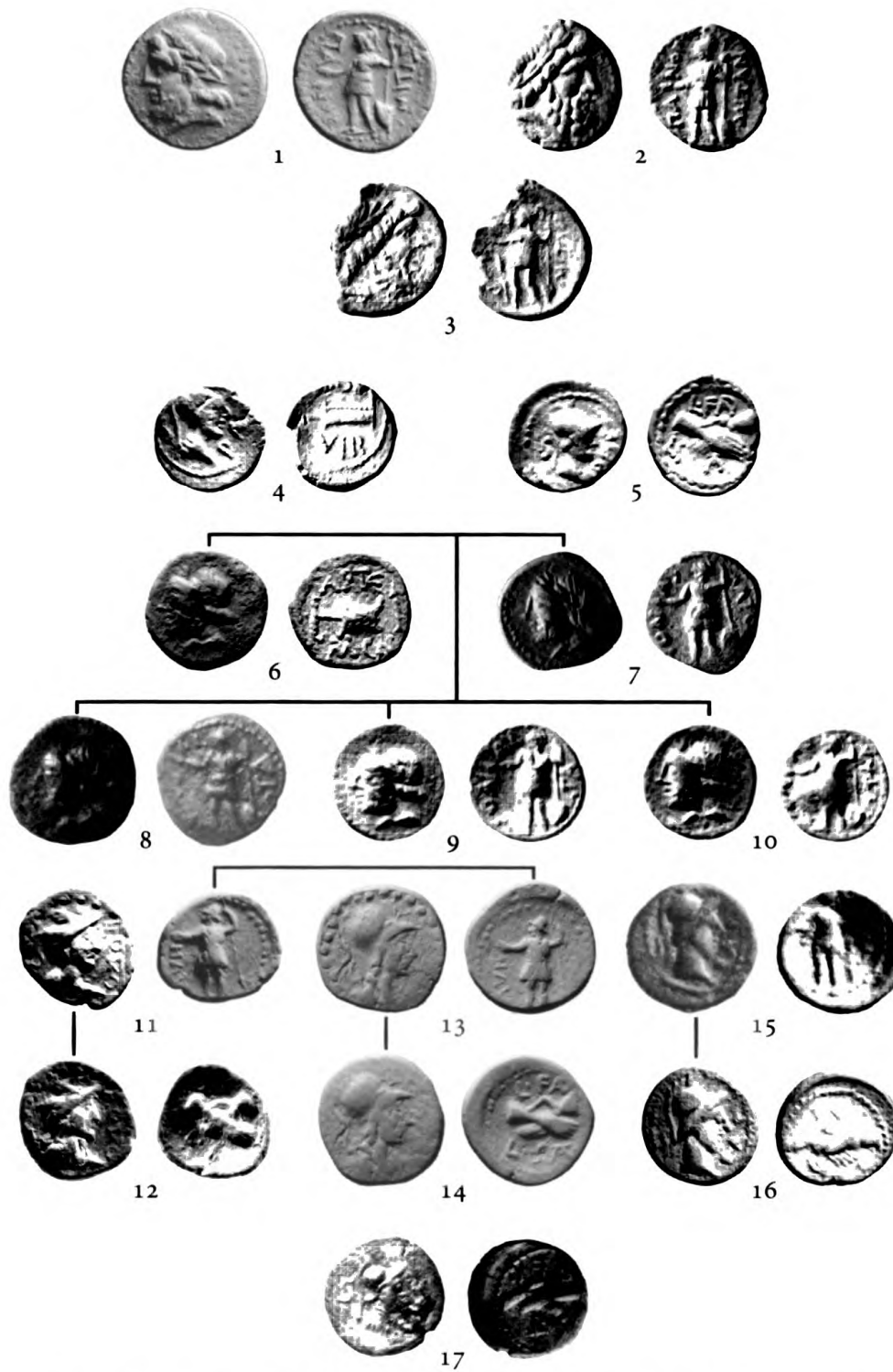
18a



19a



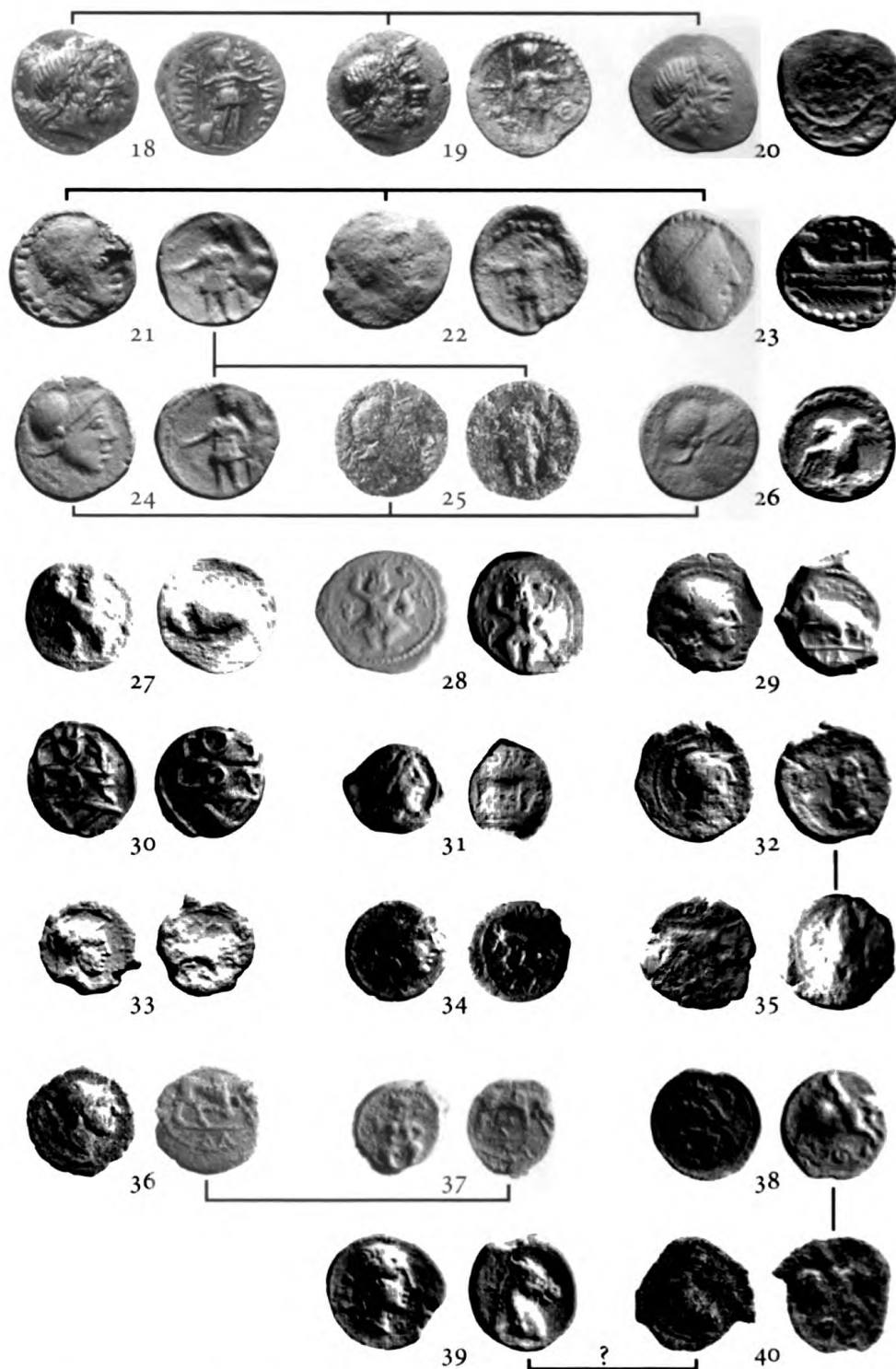
Tigranes IV, V, and VI: New Attributions



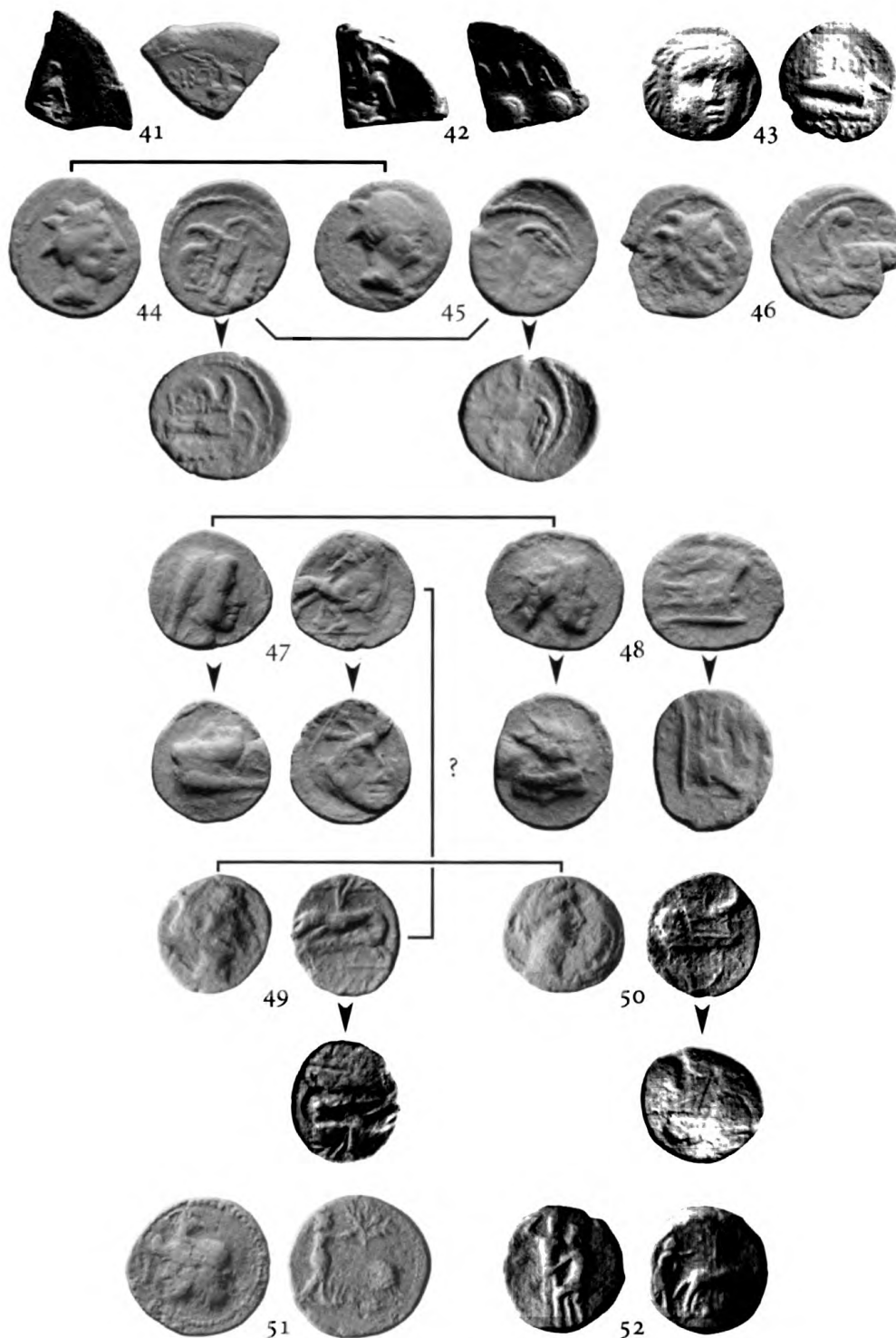
"Pseudomints" and Small Change in Italy and Sicily in the Late Republic



Plate 84

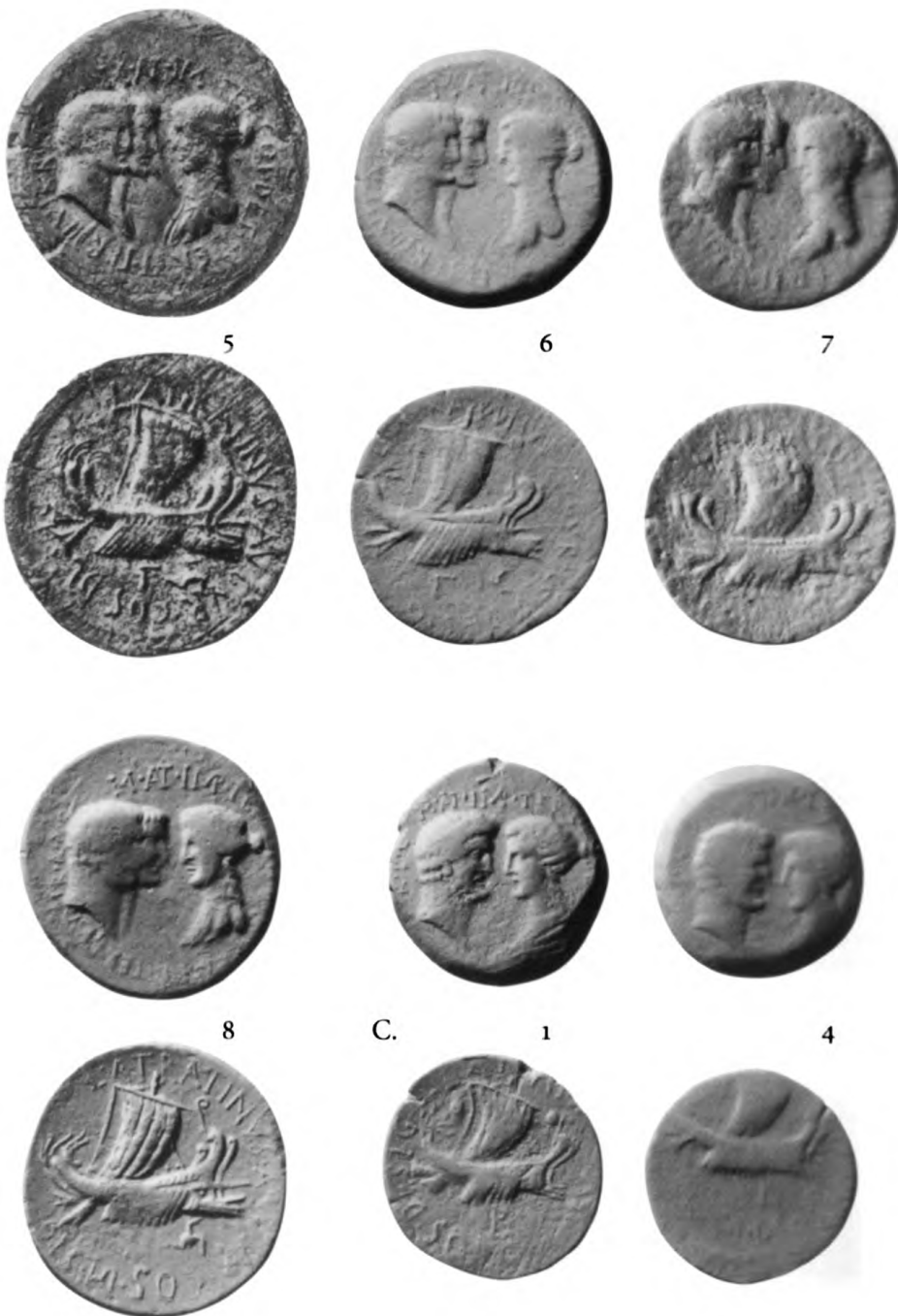


"Pseudomints" and Small Change in Italy and Sicily in the Late Republic



"Pseudomints" and Small Change in Italy and Sicily in the Late Republic

Plate 88



I. Série lourde

Le monnayage de L. Sempronius Atratinus revisité



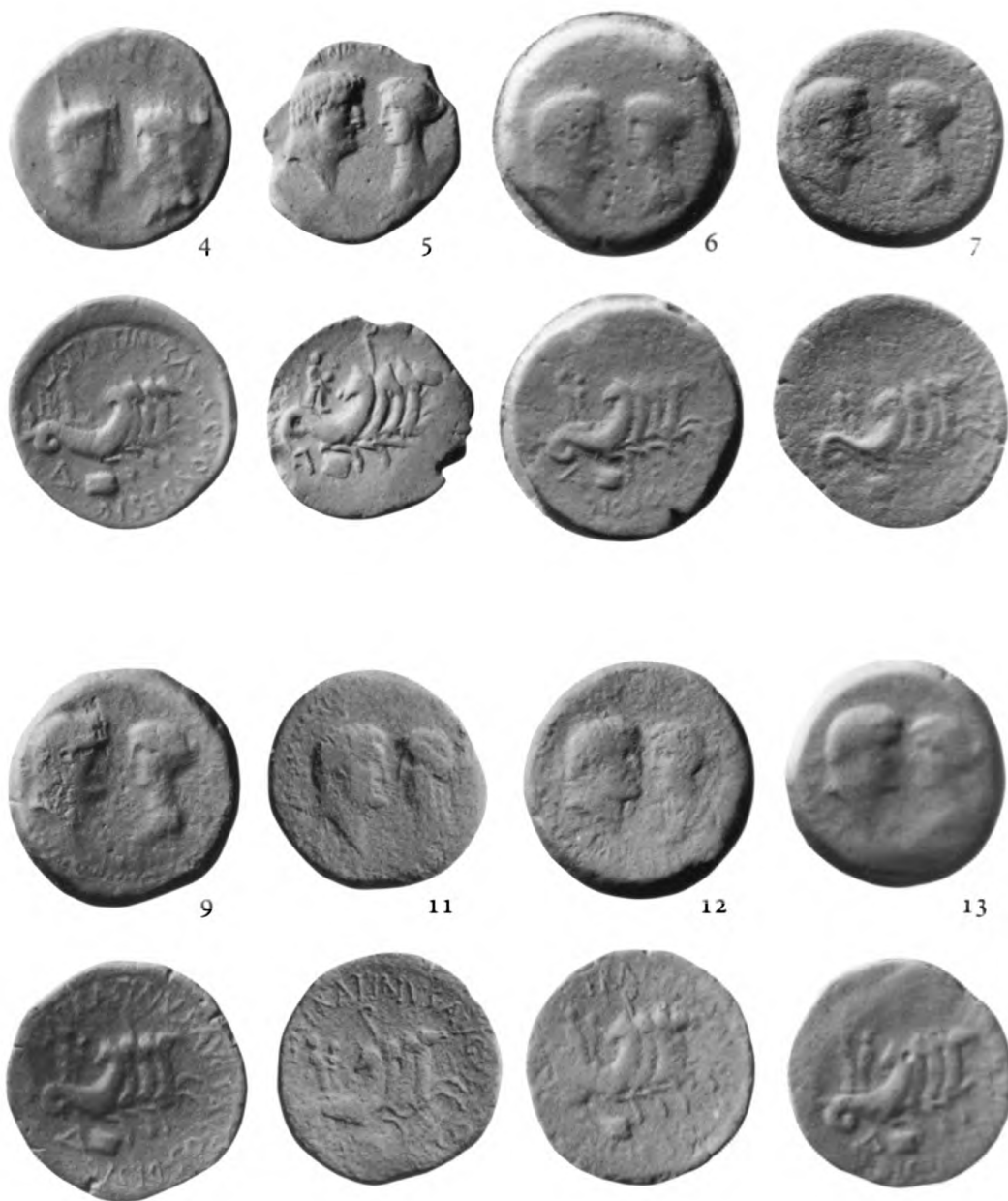
I. Série lourde



II. Série légère

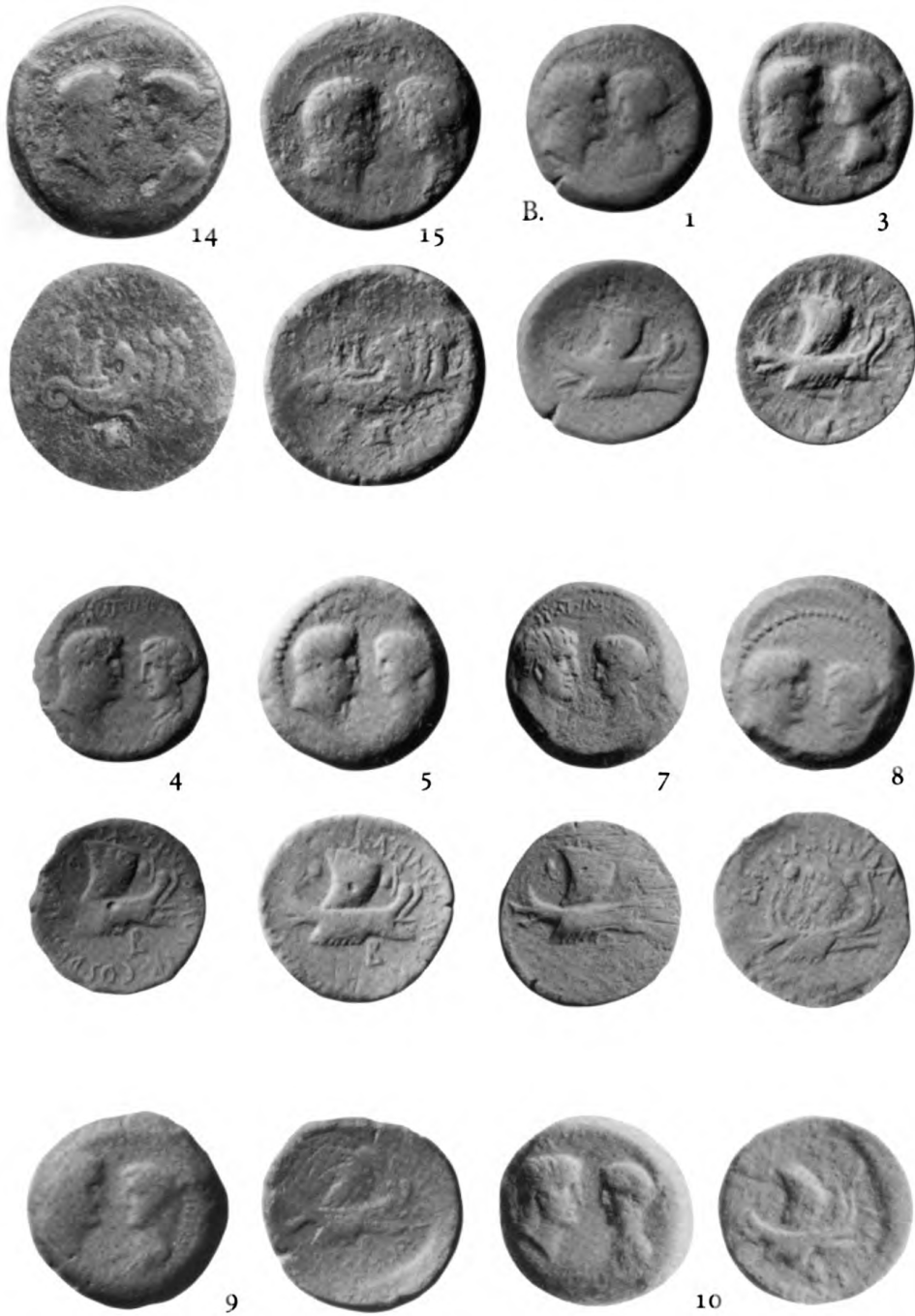
Le monnayage de L. Sempronius Atratinus revisité

Plate 92



II. Série légère

Le monnayage de L. Sempronius Atratinus revisité



## II. Série légère

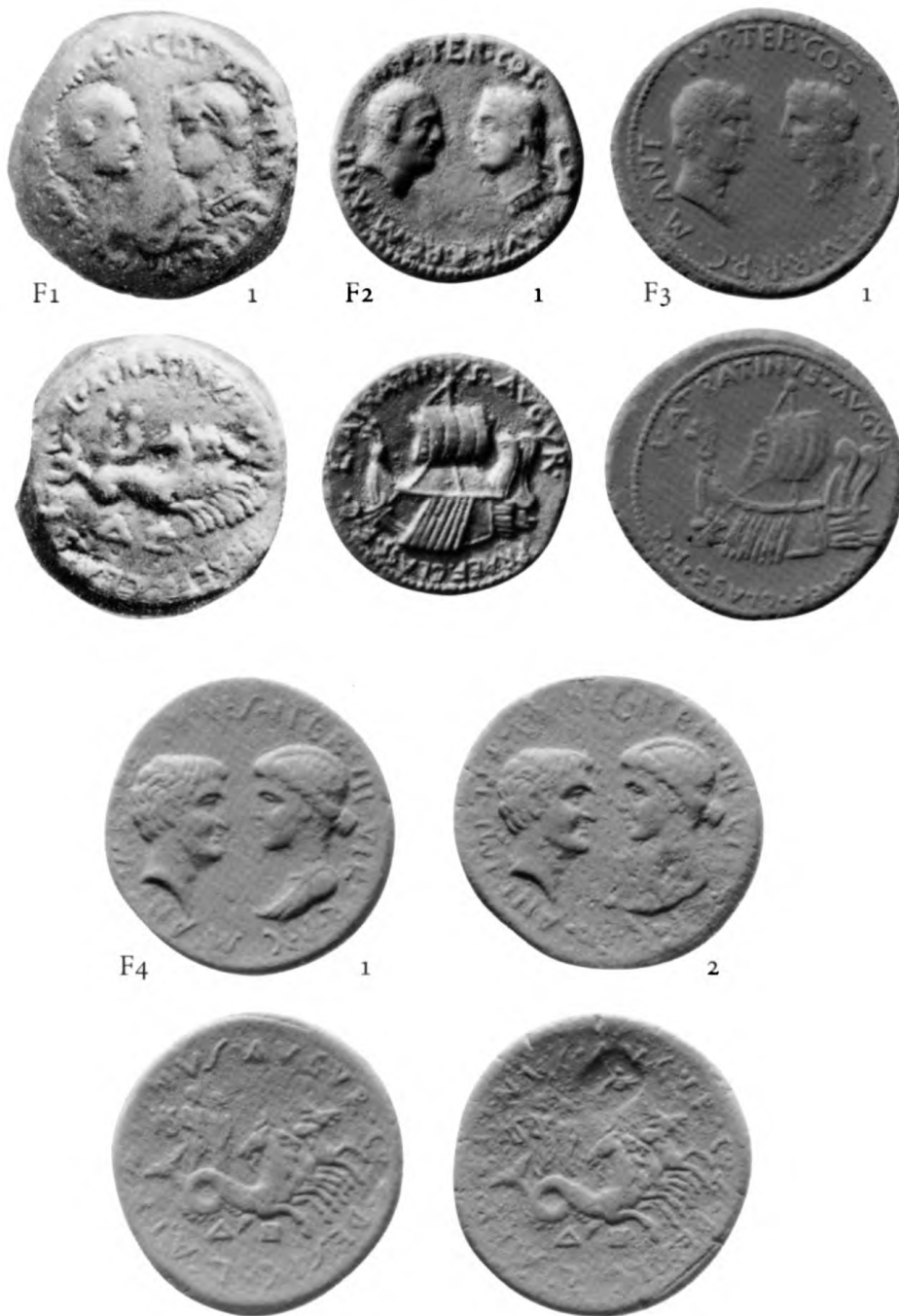
Le monnayage de L. Sempronius Atratinus revisité

Plate 94



II. Série légère

Le monnayage de L. Sempronius Atratinus revisité

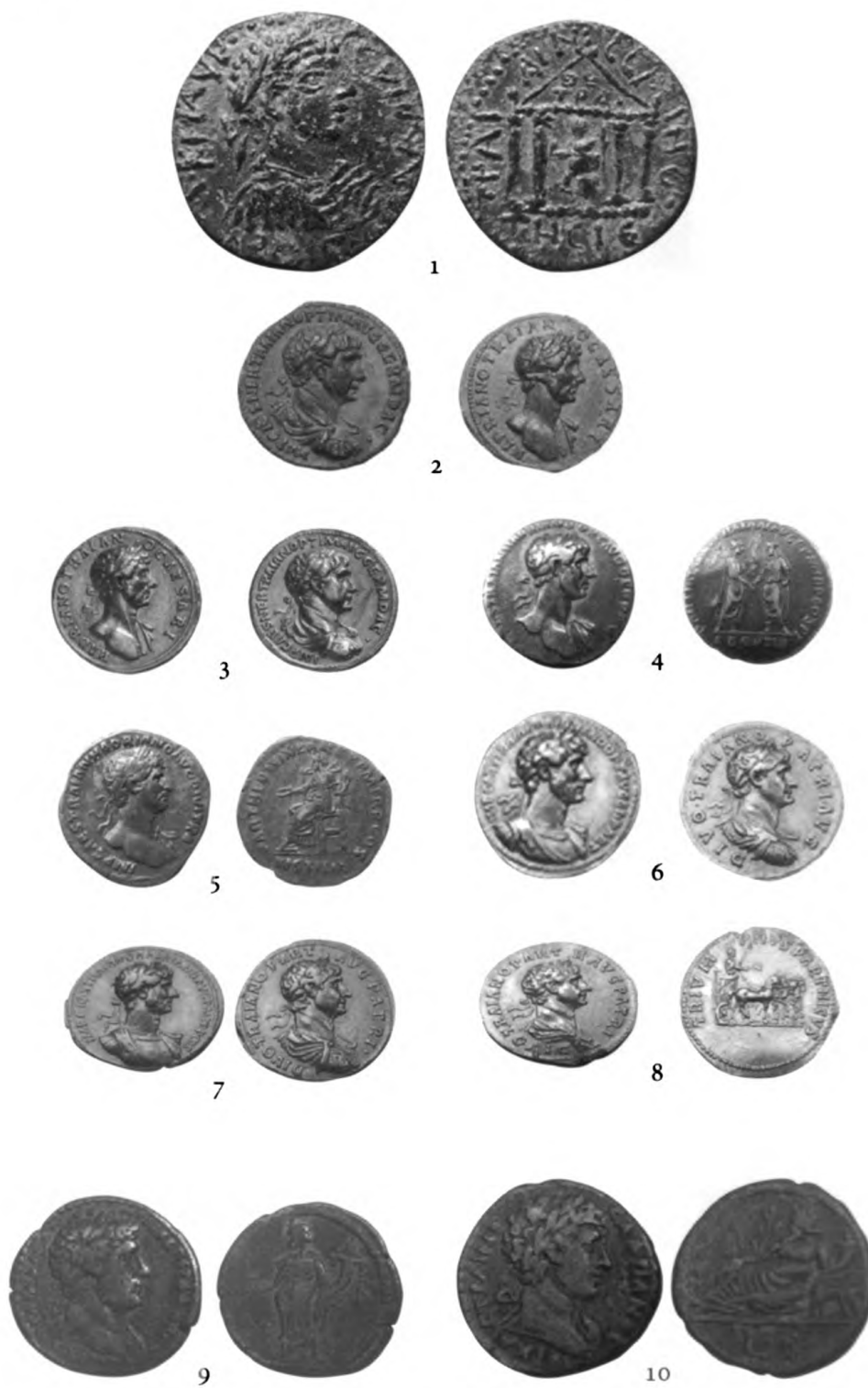


Faux modernes

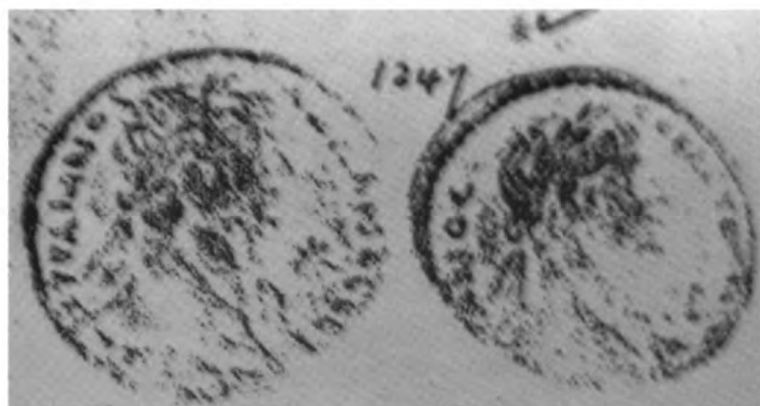
Le monnayage de L. Sempronius Atratinus revisité



Plate 96



The early coinage of Hadrian and the deified Trajan at Rome and Alexandria



The early coinage of Hadrian and the deified Trajan at Rome and Alexandria

Plate 98



1



2



3



4

Tarsos, Aboukir, etc.; before and after. Once again



5



6



7



8

Tarsos, Aboukir, etc.; before and after. Once again



I



II



Alexander in Gold and Silver



III



Alexander in Gold and Silver



A



B



C

Alexander in Gold and Silver





D



E



F

Alexander in Gold and Silver



Plate 104



G



H



I

Alexander in Gold and Silver



K



L



M detail



M

Alexander in Gold and Silver

Plate 106



N



O



P

Alexander in Gold and Silver



Q



R



S

Alexander in Gold and Silver

Plate 108



T



U



Athens

Alexander in Gold and Silver

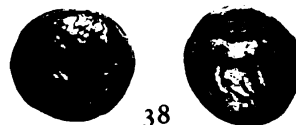
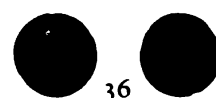
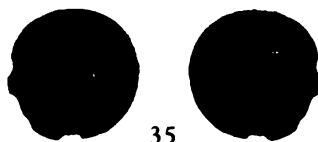
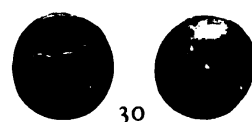
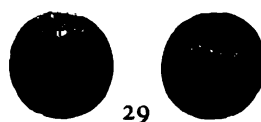
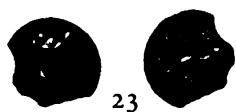


Cambridge



Alexander in Gold and Silver

Plate 110



Alexander in Gold and Silver



A Hoard of Dacian Imitations from Sarmizegetusa Regia



Plate 112

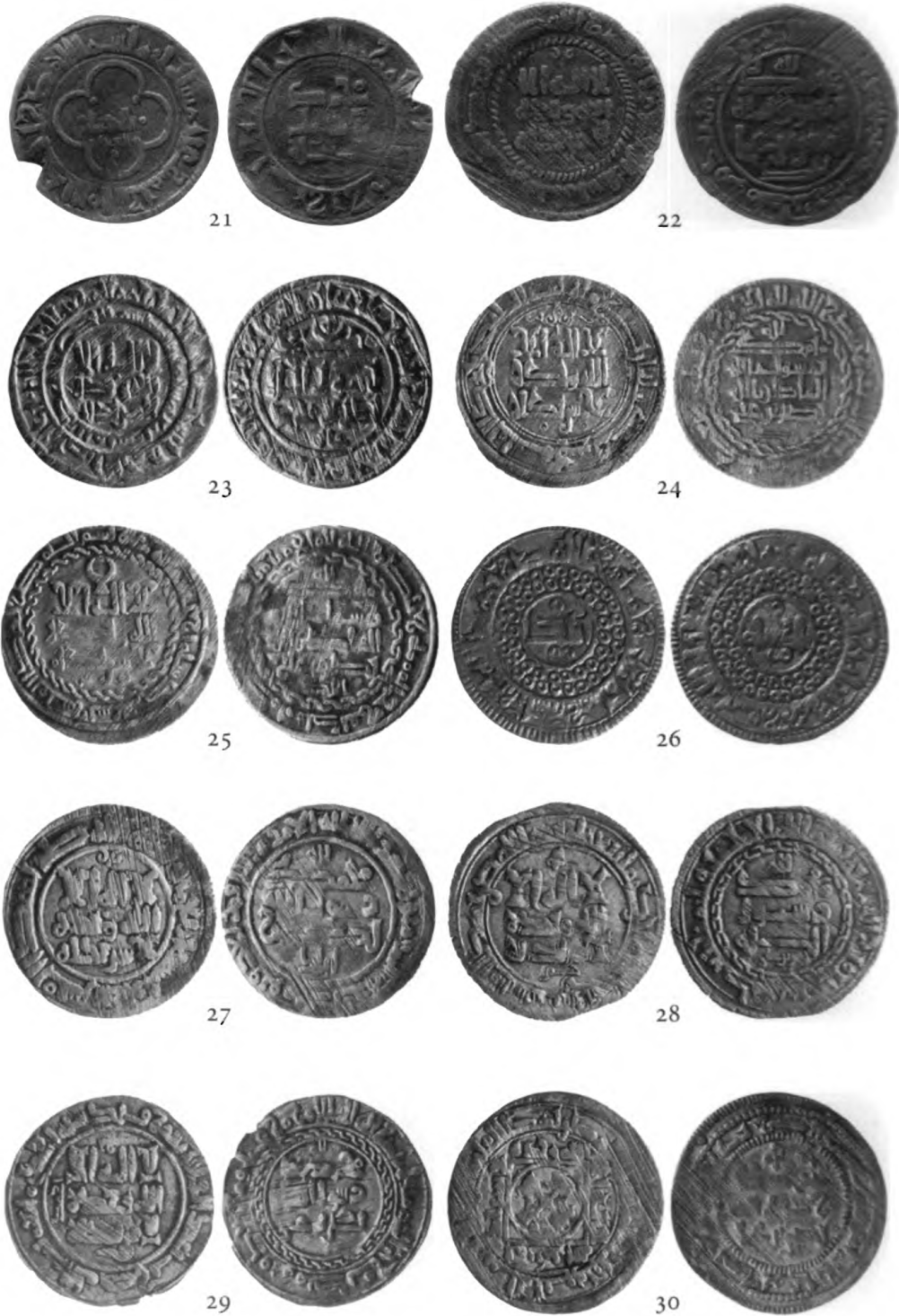


On Some Rare Early Qarākhānid Fulūs

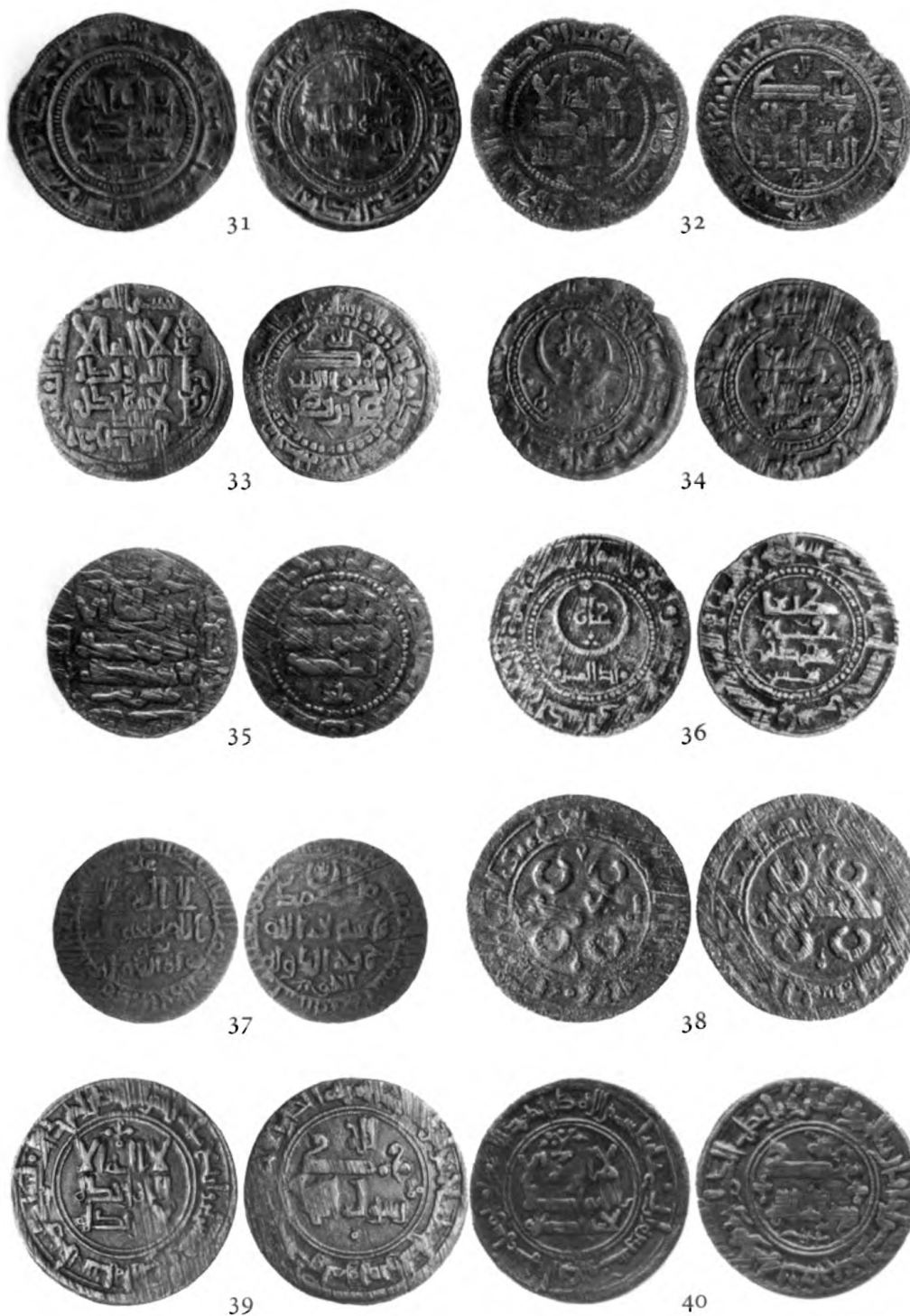


On Some Rare Early Qarākhānid Fulūs

Plate 114

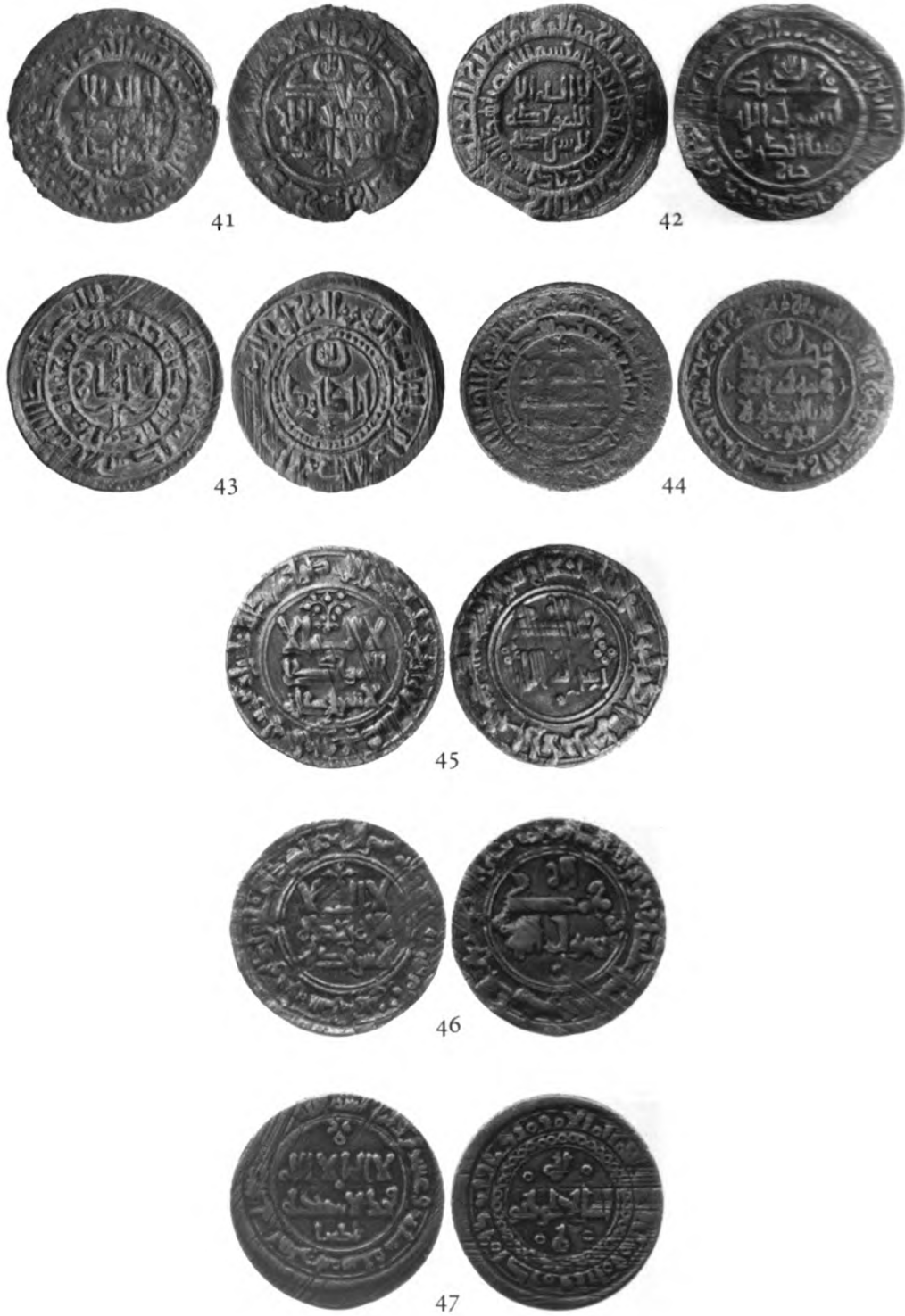


On Some Rare Early Qarākhānid Fulūs



On Some Rare Early Qarākhānid Fulūs

Plate 116



On Some Rare Early Qarākhānid Fulūs



1



2



3

An Unpublished AH 607 Uzzend Dirham







